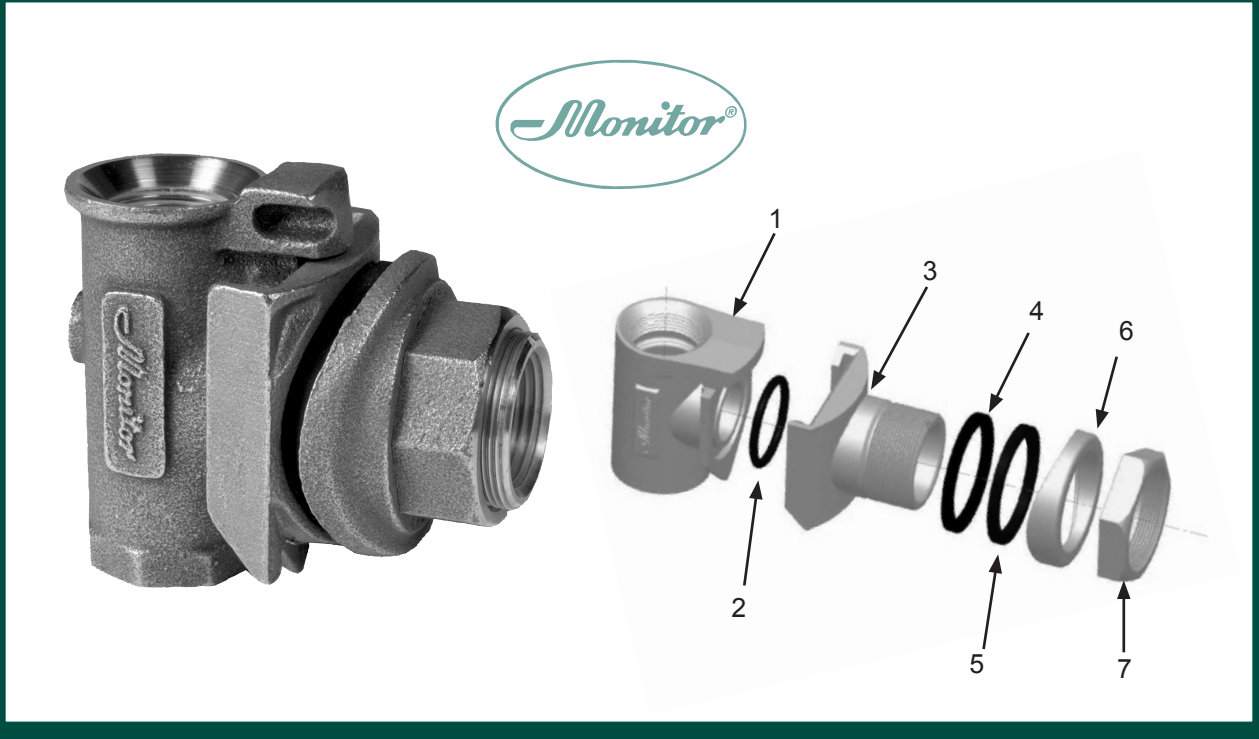
Catalog: DPR 12/11

Monitor®

DOMESTIC REPAIR PARTS MANUAL & INSTALLATION INSTRUCTION CATALOG



BAKER® WATER SYSTEMS DIVISION
Campbell Monitor MONOFLEX
Quality, Service & Solutions

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ALPHABETICAL INDEX

Quick Reference Guide

Page 2-8 ..... Caps
8-17 ..... Pitless Adapters
18 ..... Tank Tees
19-26 ..... Pitless Units
27 ..... O-Ring Selection Guide
28-29 ..... Yard Hydrants
30-39 ..... Hand & Drinking Fountain Pumps
40 ..... Pump Flanges
41-46 ..... At-The-Well Controls
47 ..... Pitless Connectors
48 ..... Pipe Holder

Monitor Domestic Products

Page No.

Adapters 8-17
Aluminum Well Caps 7
At-The Well Controls 41-46

Brass Pitless Adapters 13-17
Bulldog 13-14

Caps 2-8
Conversion Kit-Hand Pumps 37

Drinking Fountain Pumps 31, 35-37
Flanges 38
Fountain Screening Kit 36

Hand Pumps 28-35
Hand Pump Shroud 37
Husky Pitless 24-25
Hydrants 28-29

Jet Pitless Units 24

Kwik Connect Units 17-23

O-Ring Selection Guide 27

Pipe Holder 48
Pitless Adapters 8-17
Pitless Connector 47
Pitless Units 19-26
Pitless Units-DQ Series 21
Pitless Units-Flowing Wells 19
Pitless Units-PJ Series 26
Pitless Units-Pressurized 20

Page No.

Snappy® 9-12
Snappy, Pressurized 10, 12

Tank Tees 16
Turtle® Caps 4-5

Weld on Adapter 8
Well Caps 3-8

Yard Hydrants 26-27

WARRANTY STATEMENT

Baker® warrants the goods manufactured by it to be free from defects in material or workmanship under normal use or service, for a period of one year from date of shipment.

This warranty does not apply to goods or parts not manufactured by Baker®, instead Baker's® obligation for these goods or parts is limited to the actual warranty extended to Baker® by the manufacturer.

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Figure 1 - Premium Ventilated Cap (4V - 7V)

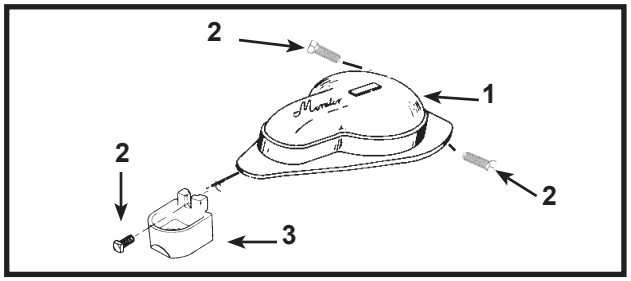
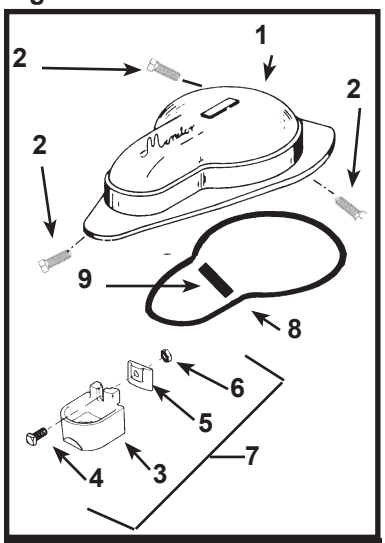
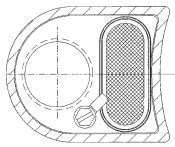


Figure 1 - Premium Ventilated Cap								
Model No.			**4V**	**5V**	**5.6V**	**6V**	**6.6V**	**7V**
Item	Qty	Description	Ord. No.	Ord. No.	Ord No.	Ord. No.	Ord. No.	Ord. No.
1	1	Seal Cap, includes Item #2	PS154	PS145	PK409	PS146	PK410	PS147
2	3	Set Screw 3/8" x 1-1/4" Long		PC288				
2	3	Set Screw 3/8" x 1" Long	PK13		PK13	PK13	PK13	PK13
3	1	Adapter for Seal Cap	PK29	PK29	PK29	PK29	PK29	PK29

Figure 2 - 8VR





Bottom View of No. 7 above

Figure 2 - 8VR			
Model No.			**8VR**
Item	Qty	Description	Ord. No.
1	1	Seal Cap, includes Item #2	PS148
2	3	Set Screw 1/2" x 1-1/4" Long	PS110
3	1	Adapter for Seal Cap	
4	1	3/8" x 1-1/2" Bolt	
5	1	Seal Cap Adapter Plate Clamp	
5	1	Seal Cap Adapter Plate Clamp	PS139D
6	1	Hex Nut 3/8"-16NC	
7	--	Seal Cap Adapter Assembly	PS151
8	1	Gasket for 8VR (Large)	PS120
9	1	Gasket for 8VR (Small)	PS123

Figure 1 - Standard Turtle® Cap

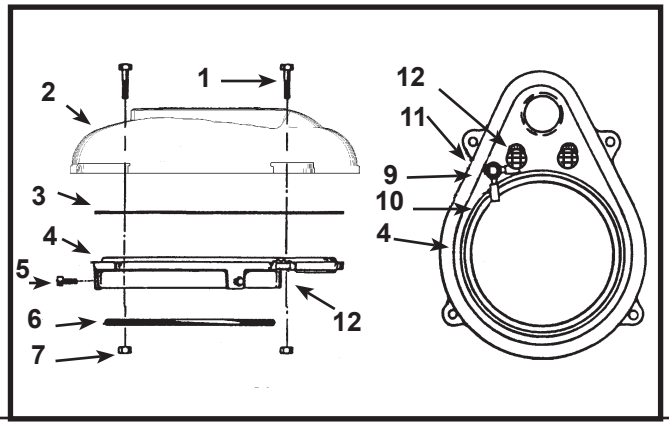


Figure 2 - Std. Turtle® Cap w/PVC Adapter

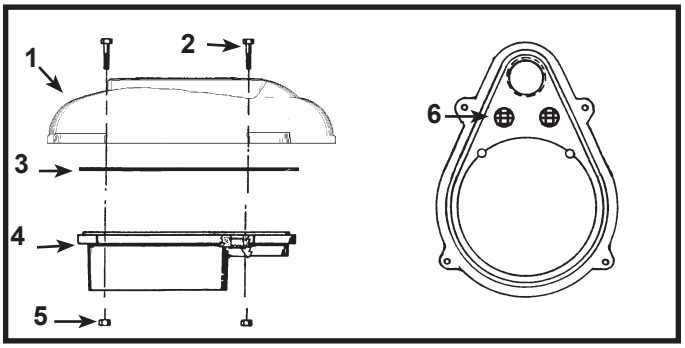


Figure 1 - Standard Turtle® Cap

Model No.			4WE1	4.5WE1	5WE1	5.5WE1	6WE1 & 1.2	6.5WE11.2	6.9WE11.2	7WE11.2
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.	Ord No.	Ord. No.	Ord. No.	Ord. No.	Ord. No.
1	4	Cap Screw 1/4-20NCX1"	PS550S	PS550S	PS550S	PS550S	PSPS550S	PS550S	PS550S	PS550S
2	1	Seal Cap	PS5441	PS5451	PS5451	PS5461	PS5461	PS5471	PS5471	PS5471
3	1	Seal Cap Gasket	PS564	PS565	PS565	PS566A	PS566A	PS567	PS567	PS567
4	1	Retainer Ring Assembly Includes Item #5 & 12	PS594	PS594.5	PS595	PS595.5	PS596 PS5961.2*	PS59651.2	PS59651.2	PS5971.2
5	3	Set Screw 1/4-20NC	PS586	PS586	PS586	PS588	PS586	PS586	PS587	PS586
6	1	Seal O-Ring	PS574A	SE2429N70	PS575A	SE2437E70	PS576A	SE2441E70	PL87	PS577A
7	4	Hex Nut 1/4-20NC	FM7S	FM7S	FM7S	FM7S	FM7S	FM7S	FM7S	FM7S
9	1	Washer 1/4" S.S.	PS536	PS536	PS536	PS536	PS536	PS536	PS536	PS536
10	2	Wire Terminal	PS537	PS537	PS537	PS537	PS537	PS537	PS537	PS537
11	1	Cap Screw 1/4-20NC X 1/2 L.	PS535	PS535	PS535	PS535	PS535	PS535	PS535	PS535
12	2	Screened Vent	PS585	PS585	PS585	PS585	PS585	PS585	PS585	PS585
--	1	Bag Assembly, includes Item #1, 7, 9, 10 & 11	WE1	WE1	WE1	WE1	WE1	WE1	WE1	WE1

*With 1 1/4" Conduit

Figure 2 - Std. Turtle® Cap w/PVC Adapter

Model No.			4WE1P	5WE1P	6WE1P
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	1	Seal Cap	PS5441	PS5451	PS5461
2	4	Cap Screw-1/4X20UNCX1"-18.8 S.S.	PS550S	PS550S	PS550S
3	1	Gasket	PS564	PS565	PS566A
4	1	Cap Adapter, PVC-includes #6	PS464FRO	PS465FRO	PS466FRO
5	4	1/4" SS Hex. Head Nut	FM7S	FM7S	FM7S
6	2	Screened Vent	PS585	PS585	PS585
--	1	Bag assembly-includes Item #2 & 5	WE1P	WE1P	WE1P

INSTALLATION INSTRUCTIONS FOR STD. TURTLE® CAP ONLY: Stretch O-Ring over casing, flush with the top. Place retainer ring, with set screws retracted, over O-Ring. Be sure set screws do not project and cut into O-Ring. Push down until O-Ring rolls against shoulder. Tighten set screws evenly. DO NOT OVER TIGHTEN. The well cap needs to be bonded to the system ground per applicable NEC or local electrical codes. Any questions about grounding should be directed to a licensed electrician. Do not position wire terminals over vent opening. Position gasket onto retainer ring and bolt cap on securely.

Follow Standard Procedure for Solvent Welding PVC Base Ring.

Figure 1 - Plastic Turtle® Cap for Steel Casing

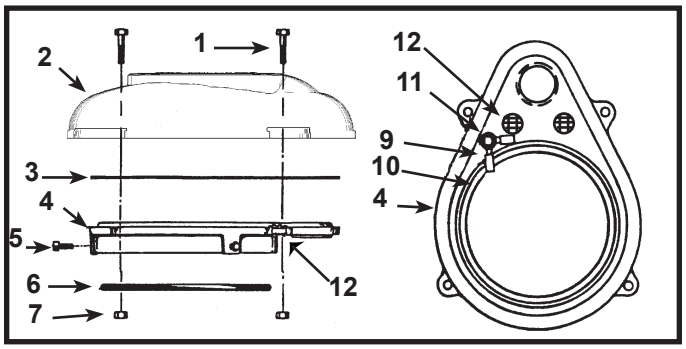


Figure 2 - Plastic Turtle® Cap w/PVC Adapter

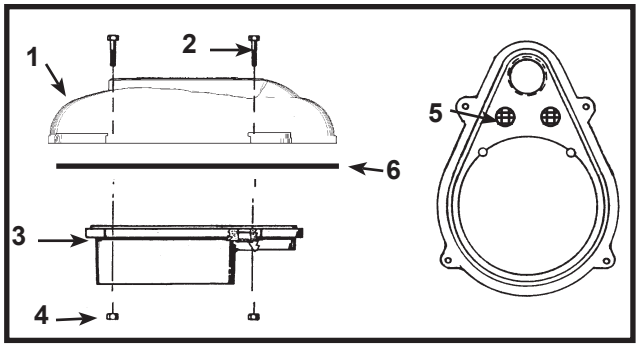


Figure 1 - Plastic Turtle® Cap for Steel Casing							
Model No.			**4PM1**	**4.5PM1**	**5PM1**	**5.5PM1**	**6PM1 & 11.2**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.	Ord No.	Ord. No.
1	4	Cap Screw 1/4-20NCX1"	PS550S	PS550S	PS550S	PS550S	PS550S
2	1	Seal Cap	PS5441P	PS5451P	PS5451P	PS5461P	PS5461P
3	1	Gasket	PS564	PS565	PS565	PS566A	PS566A
4	1	Retainer Ring Asmb., inc. #5 & 12	PS594	PS594.5	PS595	PS595.5	PS596
5	3	Set Screw 1/4-20NC	PS586	PS586	PS586	PS588	PS586
6	1	Seal O-Ring	PS574A	SE2429N70	PS575A	UC15	PS576A
7	4	Hex Nut 1/4-20NC	FM7S	FM7S	FM7S	FM7S	FM7S
9	1	Washer 1/4" S.S.	PS536	PS536	PS536	PS536	PS536
10	2	Wire Terminal	PS537	PS537	PS537	PS537	PS537
11	1	Cap Screw 1/4-20NC X 1/2 L.	PS535	PS535	PS535	PS535	PS535
12	2	Screened Vent	PS585	PS585	PS585	PS585	PS585
--	1	Bag Asmb., includes #1,7,9,10 & 11	WE1	WE1	WE1	WE1	WE1
		* with 1 1/4" Conduit					

Figure 2 - Std. Turtle® Cap w/PVC Adapter					
Model No.			**4PT1**	**5PT1**	**6PT1**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	1	Seal Cap	PS5441P	PS5451P	PS5461P
2	4	Cap Screw-1/4X20NCX1	PS550S	PS550S	PS550S
3	1	Cap Adapter, PVC-includes #5	PS464FRO	PS465FRO	PS466FRO
4	4	1/4" SS Hex. Head Nut	FM7S	FM7S	FM7S
5	2	Screened Vent	PS585	PS585	PS585
--	1	Bag assembly-includes Item #2 & 4	WE1P	WE1P	WE1P
6	1	Gasket	PS564	PS565	PS566A

Note: ( ) designates quantity for that unit.

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Figure 1 - Premium Watertight Cap

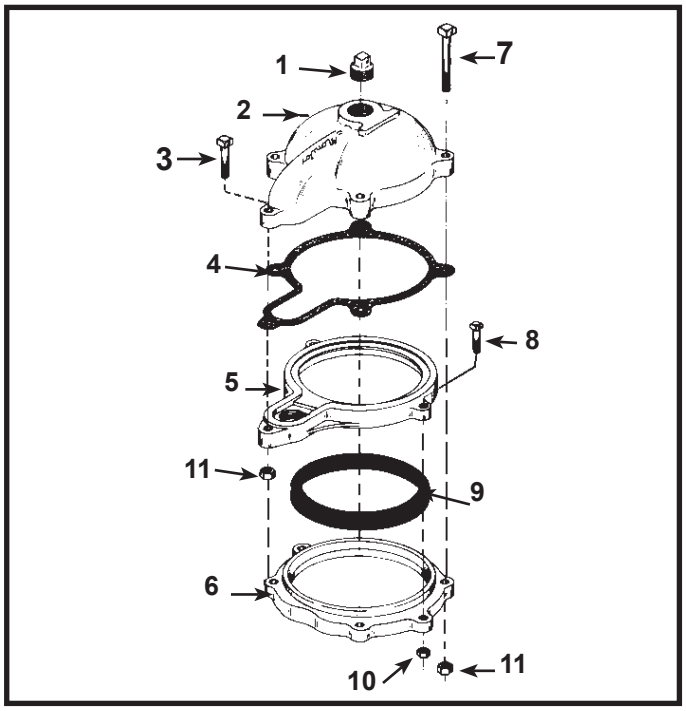
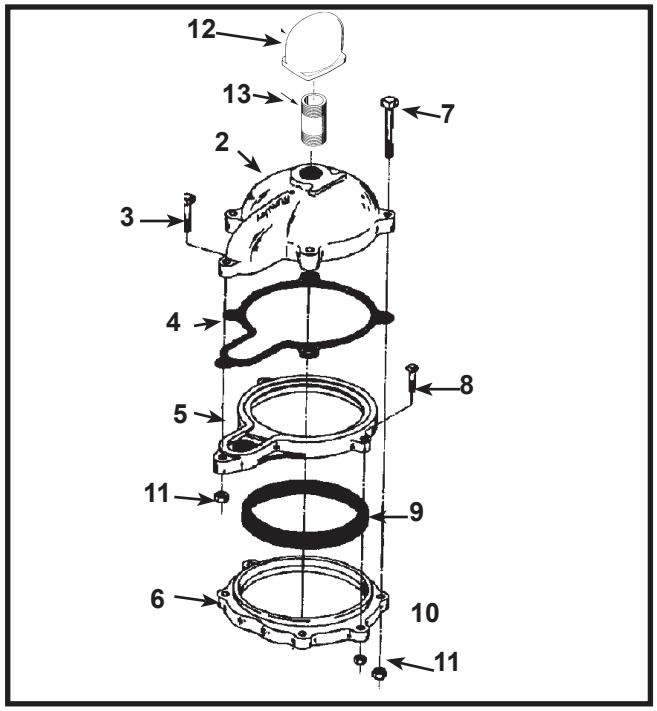


Figure 2 - Premium Watertight Cap with Air Vent



Model No. Figure 1			**4W**	**5W**	**6W**	**6.6W**
Model No. Figure 2			**4WPSM**	**5WPSM**	**6WPSM**	**6.6WPSM**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.	Ord. No.
1	1	Galvanized Plug	UN120	UN120	HD71G	HD71G
2	1	Seal Cap	PS134	PS135	PS136	PS136.6
3	**1**	Bolt, 3/8 x 2-1/4" L.	PS92S	PS92S		
3	**1**	Bolt, 3/8 x 2-1/2" L.			PS93S	PS93S
4	1	Gasket	PS194	PS195	PS196	PS196.6
5	1	Retainer Ring	PS374	PS375	PS376	PS376.6
6	1	Depression Ring	PS184	PS185	PS186	PS186.6
7	**4**	Bolt, 3/8-16NC x 3-1/2" L.	PS94S	PS94S	PS94S (5)	PS94S (6)
8	2	Bolt, 5/16-18 NC x 2" L.	PS132S	PS132S	PS132S	PS132S
9	1	Seal Ring	PS164	PS165	PS166	PS166.6
10	2	Nut, 5/16-18NC	PC434S	PC434S	PC434S	PC434S
11	**5**	Nut, **3/8**-16NC (bolts at lid)	UB17S	UB17S	UB17S **(6)**	UB17S **(7)**
12	1	Cap Vent & Screen	PS247	PS247	PS152	PS152
13	1	Galvanized Nipple	PN13	PN13	PS262	PS262
--	--	Bag assembly of bolts/nuts	WBAG	WBAG	WBAG1	WBAG7

Note: ( ) designates quantity for that unit.

All hardware is stainless steel

Monitor® WELL CAPS

Figure 1 - Premium Watertight Cap

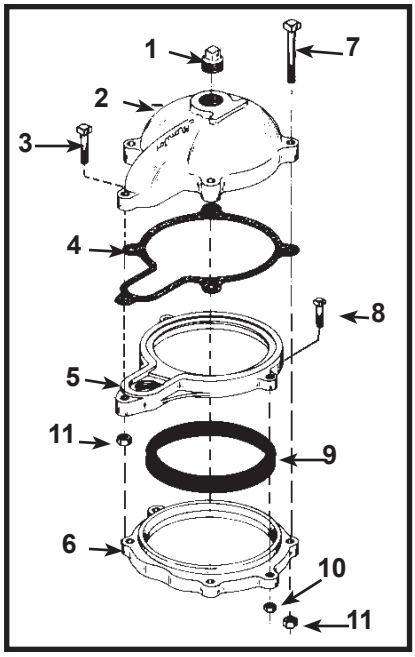
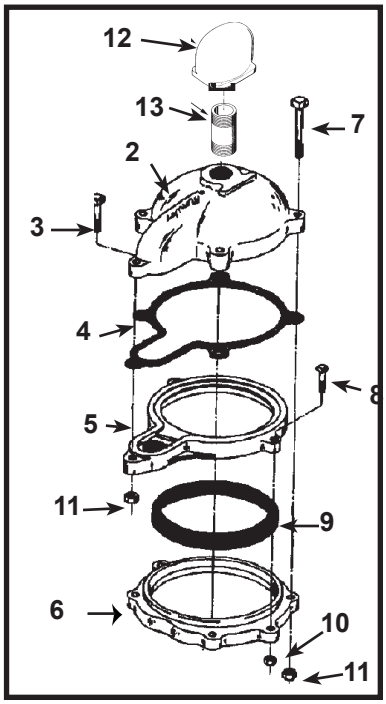
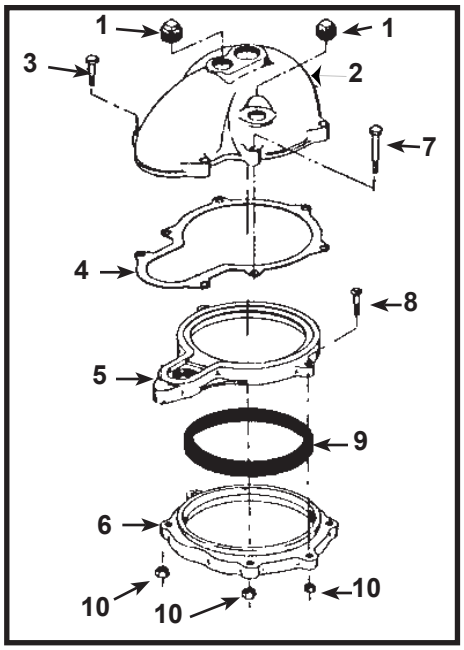


Figure 2 -Premium Watertight Cap w/Air Vent



***Model 12W**



Model No. Figure 1			**7W**	**8W**	**10W**	**12W***
Model No. Figure 2			**7WPSM**	**8WPSM**		
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.	Ord. No.
1	1	Galvanized Nipple	UG54G	UJ50G		
1&2	1	Seal Cap & Plug Assembly	PS217	PS218	PS350	UK850
2	1	Seal Cap	PS137	PS138		
3	1	Bolt, 3/8 x 2-1/2" L.	PS93S			
3	1	Bolt, 1/2 x 3" L.		APC7S	APC7S	
3	2	Bolt, 5/8 x 4-3/4" L.				LK4S
4	1	Gasket	PS197	PS198	PS342	UK72
5	1	Retainer Ring	PS377	PS178	PS341	UJ174
6	1	Depression Ring	PS187	PS188	PS189	UJ175
7	6	Bolt, 3/8-16NC x 3-1/2" L.	PS94S			
7	5	Bolt, 1/2 x 4-1/2" L.		PS221S	PS221S (6)	
7	5	Bolt, 5/8 x 5-1/2" L.				KP145S
8	2	Bolt, 5/16-18 NC x 2" L.	PS132S			
8	3	Bolt, 1/2 x 2-1/2" L.		PS111S	PS111S	
8	3	Bolt, 5/8 x 3-1/2" L.				UJ177S
9	1	Seal Ring	PS167	PS168	PS170	UJ176
10	2	Nut, 5/16-18NC	PC434S			
10-11	9	Nut, 1/2 - 13NC		PC433S	PC433S (10)	
10	10	Nut, 5/8 x 11NC				PC286S
11	**7**	Hex Nut, 3/8-16NC	UB17S			
12	1	Cap Vent & Screen	PS150	73PS		
13	1	Galvanized Nipple	PS263	PS265		
--	--	Bag assembly of bolts/nuts	WBAG7	WBAG3	WBAG4	WBAG5

Note: ( ) designates quantity for that unit.

All hardware is stainless steel

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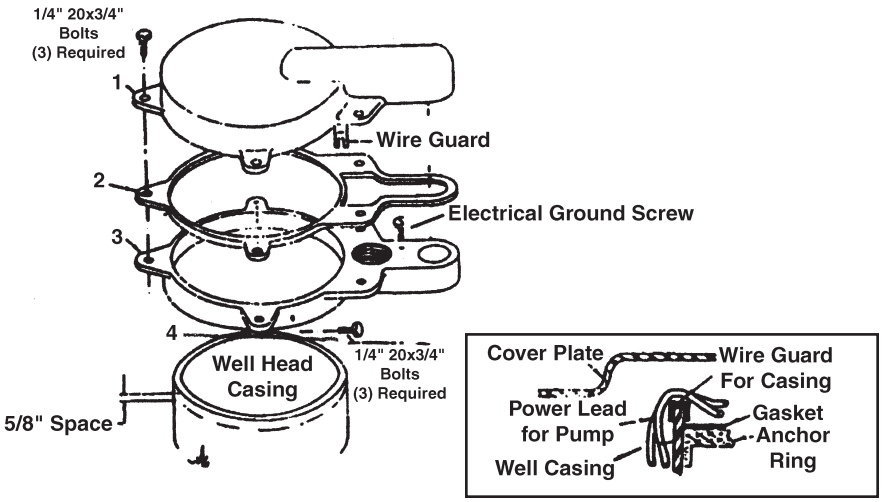
Monitor® WELL CAPS

Vermin Proof Aluminum Well Cap Instruction Sheet
Code approved in Wisconsin, Minnesota, Illinois, Michigan & Iowa



QUALITY FEATURES:

- All ground screw and bolts are stainless steel, will not corrode.
- 3/8" Tenzalloy alloy anchor ring for added strength.
- Custom Cap personalization available.
- Molded Kroyton "G" 3/16" gasket for all season flexibility.

INSTRUCTIONS:

1. Place anchor ring approximately 5/8" over well casing and tighten (3) bolts
2. Place gasket over well casing and align with anchor ring.
3. Place wire guard over casing and insert electrical ground screw.
4. Loosely attach cover plate to anchor ring with (5) bolts
5. To properly seal casing, loosen anchor ring bolts and tighten cover plate bolts evenly.
6. Retighten anchor ring bolts.

Model No.			4WTVA	4.5WTVA	5WTVA	5.5WTVA	6WTVA
Item No.	Description	Qty	Order #	Order #	Order #	Order #	Order #
1	Cover Plate	1	AC4	AC4.5	AC5	AC5.5	AC6
2	Gasket	1	AG4	AG4.5	AG5	AG5.5	AG6
3	Anchor Ring	1	AR4	AR4.5	AR5	AR5.5	AR6
4	Bolt Kit	1	AB4	AB4.5	AB5	AB5.5	AB6

Model No.			7WTVA	7.5WTVA	8WTVA	10WTVA	12WTVA
Item No.	Description	Qty	Order #	Order #	Order #	Order #	Order #
1	Cover Plate	1	AC7	AC7.5	AC8	AC10	AC12
2	Gasket	1	AG7	AG7.5	AG8	AG10	AG12
3	Anchor Ring	1	AR7	AR7.5	AR8	AR10	AR12
4	Bolt Kit	1	AB7	AB7.5	AB8	AB10	AB12

Figure 1 - 3WJ Cap for Jet Pump Installations

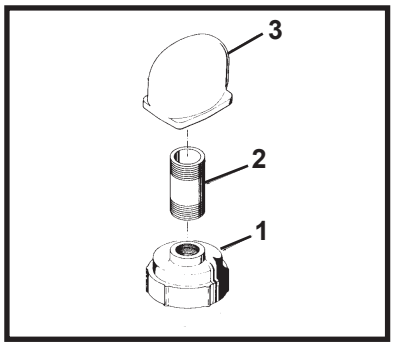
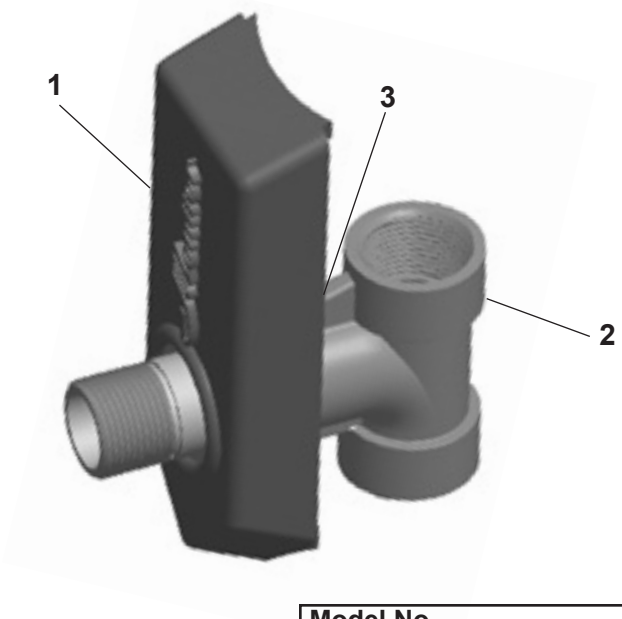


Figure 1 - 3WJ Cap for Jet Pump Installations			
Model No.			**3WJ**
Item	Qty	Description	Ord. No.
1	1	Watertight cap w/1" Tapping	NA31P
2	1	1 x 3 Galv. Nipple	PN13
3	1	Cap Vent & Screen	PS247

OM27 (1-1-95)

WELD ON PITLESS ADAPTERS

6123BEZ Weld On Pitless Adapter Installation Instructions



- Level Casting on Pipe
- Mark outside edges of casting
- Mark 1/4" inside right and left side only
- Cut left and right sides intersecting with top and bottom lines
- Check hole size with brass fitting before welding to be sure it is big enough

Model No.			**6123BEZ**
Item	Qty	Description	Ord. No.
1	1	Weldment	C6W
2	1	Adapter	BH61M
3	1	O-ring	PL3

INSTALLATION INSTRUCTIONS

① Excavate around the well casing to a depth sufficiently below the frost line to mount the casing according to government regulations fitting.

② To cut the casing hole with a hole saw use a 2-3/8" diameter saw. Locate the hole at right angles to the discharge line for a swing joint. A Black and Decker "Twiston" hole saw, or the equivalent, is recommended for this purpose. A little practice on the basis of the saw manufacturer's instructions is required for best results. It is important to remove the inward projecting fin formed in cutting the hole with a half round file. Steel chips adhering to the casing inside and out must be brushed away.

③ To mount strap hold strap in place, slide casing fitting over the bolt ends and against the casing and spin on nuts. Make sure that the inner lip of the fitting enters the casing hole. Tighten nuts, after which the outer edge of the casing fitting should be in contact with the casing. Torque to 10# ft., do not excede 20# ft. for PVC pipe.

④ To install pump, make up and lower the drop pipe assembly in the usual way, starting with the pump and stopping with the drop pipe fitting supported just above the well casing. Tape the motor cable to the unlabeled side of the drop pipe fitting. Coat the neoprene "O" ring with clean vaseline. Screw a 1" pipe into the drop pipe fitting and attach to hoist. Untape and uncoil the cable attached to the drop pipe fitting. With the opening in the drop pipe fitting extending in exactly the same direction as the casing fitting, slowly lower the drop pipe assembly into the well. When the drop pipe fitting aligns with the casing fitting the "T" arm of the actuator cam snaps downward thrusting the drop pipe fitting into the casing fitting sealing the joint and locking the two together.

⑤ To complete the well insert the eye of the release cable back into the well just as far enough to avoid interference with the cap. Complete the wiring and cap the well.

⑥ To pull the pump, remove the upper part of the cap. First support drop pipe with a 1" pipe screwed into the drop pipe fitting and attached to a hoist. Then release drop pipe by pulling upward on the release cable eye. The drop pipe assembly including the pump may now be withdrawn from the well.

(WARNING: Failure to support drop pipe assembly properly before pulling upward on release cable eye may result in serious injury and/or damage to drop pipe & pump assembly)

NOTE: If an At-The-Well Control system is used, the contractor will supply 1/4" nipple and 1/4" x 3/8" reducer coupling.

NOTE: Improper chlorination can lead to corrosion problems.

Installation Instructions for Pitless Adapter for Submersible Pumps with Pressurized Casing Fitting.

1. Excavate around the well casing according to government regulations to a depth sufficiently below the frostline to mount the casing fitting.

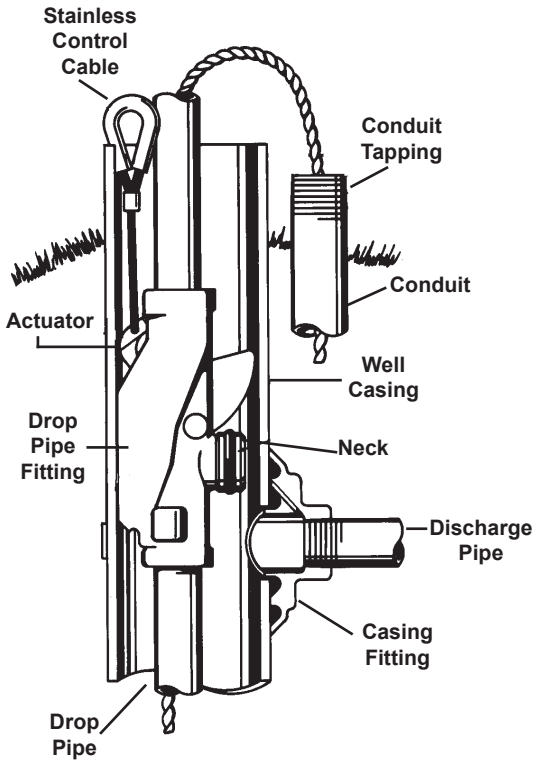
2. To cut the casing hole with a hole saw use a 2-1/8" diameter saw for 4" casing fittings and a 2-1/2" or (63mm) diameter saw for all other casing fittings sizes. Locate the hole at right angles to the discharge line for a swing joint. A Black and Decker "Twiston" hole saw, or the equivalent, is recommended for this purpose. A little practice on the basis of the saw manufacturer's instructions is required for best results. It is important to remove the inward projecting fin formed in cutting the hole with a half round file. Steel chips adhering to the casing inside and out must be brushed away. The torch cut hole is not recommended for a pressurized casing fitting because there is not enough room for the errors ordinarily encountered in torch cutting. Smooth all edges after drilling.

3. To mount strap to casing fitting hold bolt in place, slide casing fitting over the bolt ends and against the casing and spin on nuts. Make sure that the inner lip of the fitting enters the casing hole. Tighten nuts, after which the outer edge of the discharge fitting should be in contact with the casing. Torque to 10# ft., do not exceed 20# ft. for PVC pipe.

4. To install pump, make up and lower the drop pipe assembly in the usual way, starting with the pump and stopping with the drop pipe fitting supported just above the well casing. Tape the motor cable to the unlabeled side of the drop pipe fitting. Coat the neoprene O-ring with clean vaseline. Screw a 1" pipe into the drop pipe fitting and attach to hoist. Untape and uncoil the cable attached to the drop pipe fitting. With the opening in the drop pipe fitting extending in exactly the same direction as the casing fitting, slowly lower the drop pipe assembly into the well. When the drop pipe fitting aligns with the casing fitting the "T" arm of the casing fitting snaps downward thrusting the drop pipe fitting into the casing fitting sealing the joint and locking the two together.

5. To complete the well insert the eye of the release cable back into the well just far enough to avoid interference with the cap. Complete the wiring. Start the pump and check for leakage around the casing fitting and cap the well.

6. To pull the pump, remove the upper part of the cap. First support the drop pipe with a 1" pipe screwed into the drop pipe fitting and attached to a hoist. Then release the drop pipe by pulling upward on the release cable eye. The drop pipe assembly including the pump may now be withdrawn from the well.

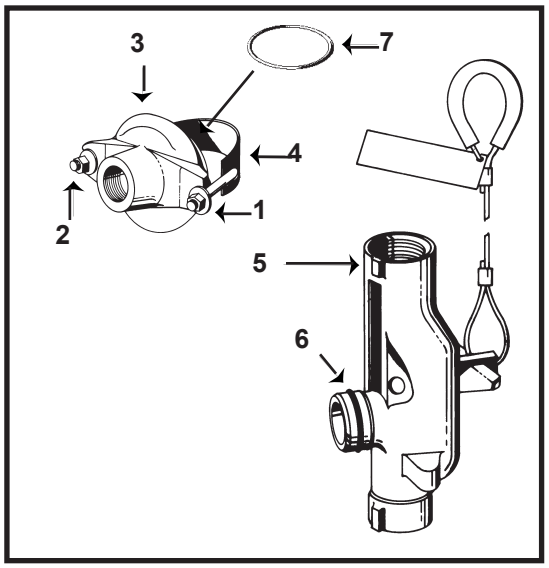


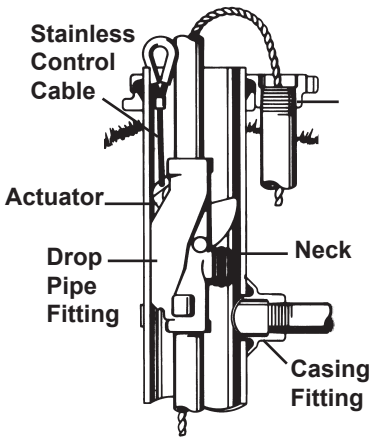
NOTE: Improper chlorination can lead to corrosion problems.

Snappy will support 1000 lbs.
Maximum pressure rated at 250 PSI

BAKER MFG. CO. • Evansville, WI 53536 • Phone: 800-356-5130
OM4006 (10/1/08)

Figure 1 - 1" Drop Pipe





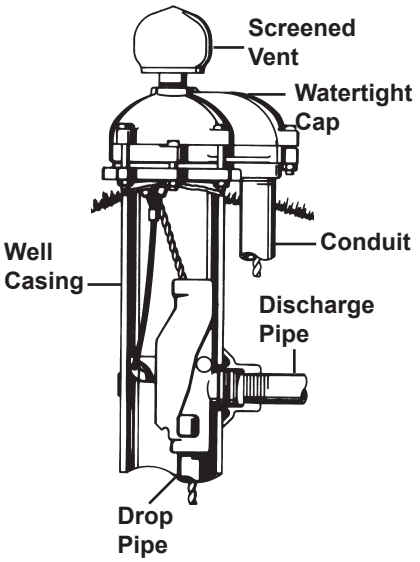


Figure 1 - 1" Drop Pipe			4" I.D. 4-1/2" O.D.	4-1/2" I.D. 5" O.D.	5" I.D. 5-9/16" O.D.	5-3/16" I.D. 5-9/16" O.D.	5-3/16x6x1
Model No.			**8PL41U**	**8PL4.31U**	**8PL51U**	**8PL5.21U**	**8PL5.25.61U**
Item	Qty	Description	Ord. No.	Ord No.	Ord. No.	Ord. No.	Ord. No.
1	2	Stainless Steel Washer	PL4S	PL4S	PL4S	PL4S	PL4S
2	2	Stainless Steel Nut	PJ50S	PJ50S	PJ50S	PJ50S	PJ50S
--	--	Set of #1 & #2	PL10S	PL10S	PL10S	PL10S	PL10S
3 & 7	1	Casing Fitting & O-ring	PL304	PL305	PL305	PL305	PL306
4	1	Casing Fitting Strap	PL214	PL225	PL215A	PL215A	PL221
5	1	Drop Ftg. Asmb w/O-ring	PL8401	PL8431	PL8501	PL8521	PL8521
6	1	O-Ring 1"	PL3	PL3	PL3	PL3	PL3
7	1	O-Ring for discharge	PL34	PL34	PL34	PL34	PL34

Figure 1 - 1" Drop Pipe			6" I.D. 6-5/8" O.D.	6-1/4" I.D. 6-5/8" O.D.
Model No.			**8PL61U**	**8PL6.21U**
Item	Qty	Description	Ord. No.	Ord. No.
1	2	Stainless Steel Washer	PL4S	PL4S
2	2	Stainless Steel Nut	PJ50S	PJ50S
--	--	Set of #1 & #2	PL10S	PL10S
3 & 7	1	Casing Fitting & O-ring	PL306	PL306
4	1	Casing Fitting Strap	PL216A	PL216A
5	1	Drop Ftg. Asmb w/O-ring	PL8601	PL8621
6	1	O-Ring 1"	PL3	PL3
7	1	O-Ring for discharge	PL34	PL34

Figure 1 - 1-1/4" Drop Pipe

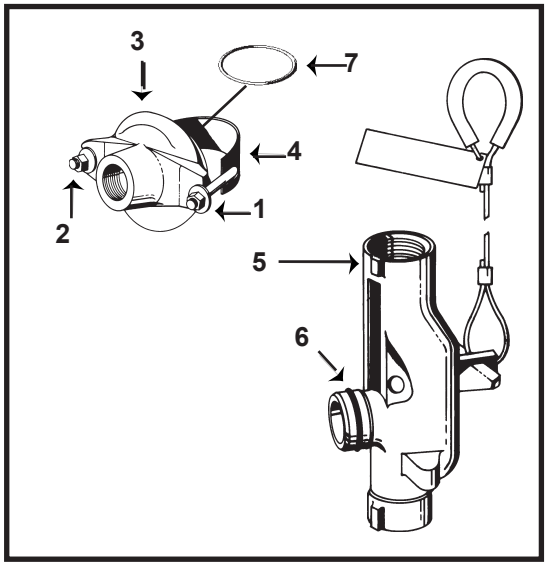
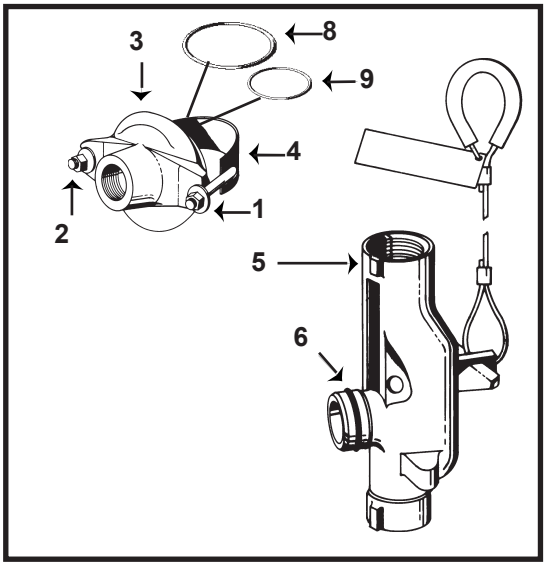


***Figure 2 - Pressurized**



						PRESSURIZED*		
						1"	1-1/4"	1-1/4"
Figure 1 - 1-1/4" Drop Pipe			**4" I.D. 4-1/2" O.D.**	**4-1/2" I.D. 5" O.D.**	**5" I.D. 5-9/16" O.D**	**4" I.D. 4-1/2" O.D.**	**5" I.D. 5-9/16" O.D.**	**6" I.D. 6-5/8" O.D.**
Model No.			**8PL41.2U**	**8PL4.31.2U**	**8PL51.2U**	**8PL04P1**	**8PL05P1.2**	**8PL06P1.2**
Item	Qty	Description	Ord. No.	Ord. No.	Ord No.	Ord. No.	Ord. No.	Ord. No.
1	2	Stainless Steel Washer	PL4S	PL4S	PL4S	PL4S	PL4S	PL4S
2	2	Stainless Steel Nut	PJ50S	PJ50S	PJ50S	PJ50S	PJ50S	PJ50S
--	--	Set of #1 & #2	PL10S	PL10S	PL10S	PL10S	PL10S	PL10S
3 & 7	1	Casing Fitting & O-ring	PL304.2	PL305.2	PL305.2	PL49	PL98	PL106
4	1	Casing Fitting Strap	PL214	PL225	PL215A	PL214	PL215A	PL216A
5	1	Drop Ftg. Asmb w/O-ring	PL84012	PL84312	PL85012	PL8401	PL85012	PL86012
6	1	O-Ring 1-1/4"	PL40	PL40	PL40	PL3	PL40	PL40
7	1	O-Ring for discharge	PL34	PL34	PL34			
8	1	Outer O-ring				PL85	PL83	PL83
9	1	Inner O-Ring				PL86	PL84	PL84

Figure 1 - 1-1/4" Drop Pipe			**6" I.D. 6-5/8" O.D.**	**6-1/4" I.D. 6-5/8" O.D.**
Model No.			**8PL61.2U**	**8PL6.21.2U**
Item	Qty	Description	Ord. No.	Ord. No.
1	2	Stainless Steel Washer	PL4S	PL4S
2	2	Stainless Steel Nut	PJ50S	PJ50S
--	--	Set of #1 & #2	PL10S	PL10S
3 & 7	1	Casing Fitting & O-ring	PL306.2	PL306.2
4	1	Casing Fitting Strap	PL216A	PL216A
5	1	Drop Ftg. Asmb w/O-ring	PL86012	PL86212
6	1	O-Ring 1-1/4"	PL40	PL40
7	1	O-Ring for discharge	PL34	PL34

BULLDOG® PITLESS ADAPTERS

INSTALLATION INSTRUCTIONS

1. Excavate around the well casing according to government regulations to a depth sufficiently below the frost line to mount the casing fitting.

2. To cut the casing hole with a hole saw use a 2-1/4" diameter saw for 1" Bulldog and 2-3/8" for the 1-1/4" Bulldog. Locate the hole at right angles to the discharge line for a swing joint. A Black and Decker “Twiston” hole saw, or the equivalent, is recommended for this purpose. A little practice on the basis of the saw manufacturer’s instructions is required for best results. It is important to remove the inward projecting fin formed in cutting the hole with a half round file. Steel chips adhering to the casing inside and out must be brushed away.

3. To mount strap hold strap in place, slide casing fitting over the bolt ends and against the casing and spin on nuts. Make sure that the inner lip of the fitting enters the casing hole. Tighten nuts, after which the outer edge of the casing fitting should be in contact with the casing. Torque to 10#ft., do not excede 20# ft. for PVC pipe.

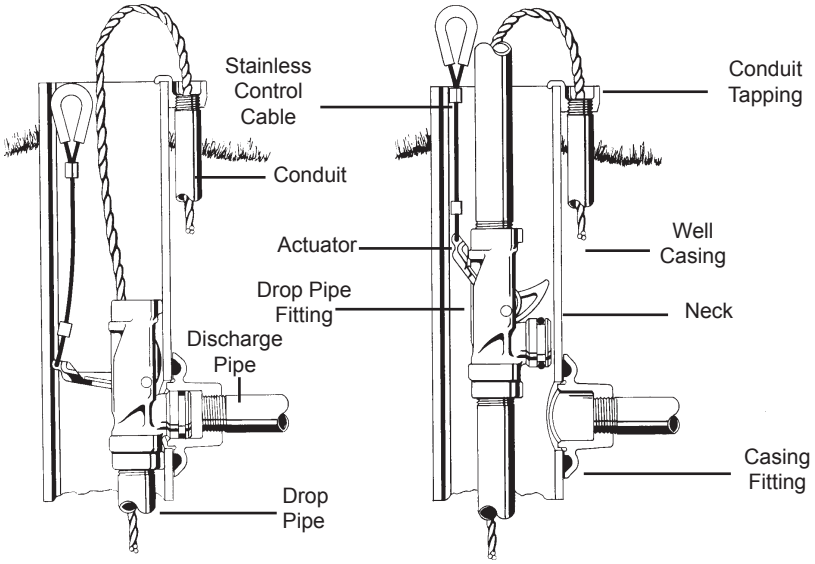
4. To install pump, make up and lower the drop pipe assembly in the usual way, starting with the pump and stopping with the drop pipe fitting supported just above the well casing. Tape the motor cable to the unlabeled side of the drop pipe fitting. Coat the neoprene “O” ring with clean vaseline. Screw a 1" pipe into the drop pipe fitting and attach to hoist. Untape and uncoil the cable attached to the drop pipe fitting. With the opening in the drop pipe fitting extending in exactly the same direction as the casing fitting, slowly lower the drop pipe assembly into the well. When the drop pipe fitting aligns with the casing fitting the “T” arm of the actuator cam snaps downward thrusting the drop pipe fitting into the casing fitting sealing the joint and locking the two together.

5. To complete the well insert the eye of the release cable back into the well just as far enough to avoid interference with the cap. Complete the wiring and cap the well.

6. To pull the pump, remove the upper part of the cap. First support drop pipe with a 1" pipe screwed into the drop pipe fitting and attached to a hoist. Then release drop pipe by pulling upward on the release cable eye. The drop pipe assembly including the pump may now be withdrawn from the well. **(WARNING: Failure to support drop pipe assembly properly before pulling upward on release cable eye may result in serious injury and/or damage to drop pipe & pump assembly)**

NOTE: Improper chlorination can lead to corrosion problems.

Bulldog will support 1000 lbs.
Maximum Pressure rated at 250 PSI



Monitor® BRASS ADAPTERS

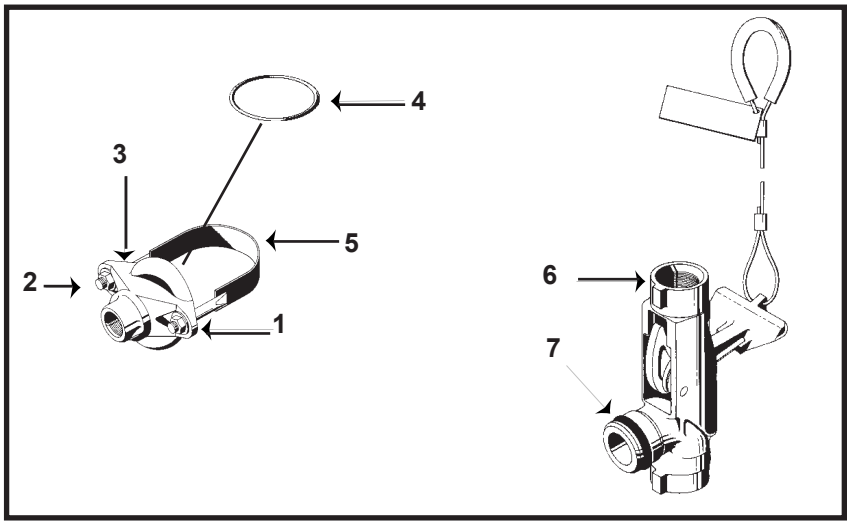


Figure 1 - 1" Drop Pipe			4" I.D. 4-1/2" O.D.	5" I.D. 5-9/16" O.D.	6" I.D. 6-5/8" O.D.
Model No.			**4A0**	**5A0**	**6A0**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	2	Stainless Steel Washer	PL4S	PL4S	PL4S
2	2	Stainless Steel Nut	PJ50S	PJ50S	PJ50S
--	--	Set of #1 & #2	PL10S	PL10S	PL10S
3 & 4	1	Casing Fitting & O-ring	PL304B	PL305B	PL306B
4	1	O-Ring for Discharge	PL34	PL34	PL34
5	1	Casing Fitting Strap	PL214	PL215A	PL216A
6	1	Drop Ftg. Asmb w/O-ring	PL8401B	PL8501B	PL8601B
7	1	O-Ring 1"	PL3	PL3	PL3

Figure 1 - 1-1/4" Drop Pipe			4" I.D. 4-1/2" O.D.	5" I.D. 5-9/16" O.D.	6" I.D. 6-5/8" O.D.
Model No.			**4B0**	**5B0**	**6B0**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	2	Stainless Steel Washer	PL4S	PL4S	PL4S
2	2	Stainless Steel Nut	PJ50S	PJ50S	PJ50S
--	--	Set of #1 & #2	PL10S	PL10S	PL10S
3 & 4	1	Casing Fitting & O-ring	PL304.2B	PL305.2B	PL306.2B
4	1	O-Ring for Discharge	PL34	PL34	PL34
5	1	Casing Fitting Strap	PL214	PL215A	PL216A
6	1	Drop Ftg. Asmb w/O-ring	PL84012B	PL85012B	PL86012B
7	1	O-Ring 1-1/4"	PL40	PL40	PL40

SANITARY ALL BRASS
PITLESS ADAPTERS FOR 5” TO 8” I.D. WELL SIZES
Installation Instructions

When the pipe trench is open, use a holesaw to cut a 1-3/4” hole in the well casing at the desired bury depth, below the frost line. Remove any burr from the edges of the hole.

Remove the nut (7) (or 1-1/4” NPT adapter coupling with o-ring (8&9)), brass collar washer (6) and thicker outside gasket (5) from the pitless adapter.

To prevent losing casing fitting (3) down the well, pull apart drop fitting (1) and casing fitting (3) and re-assemble drop fitting(1) in reverse (upside down).

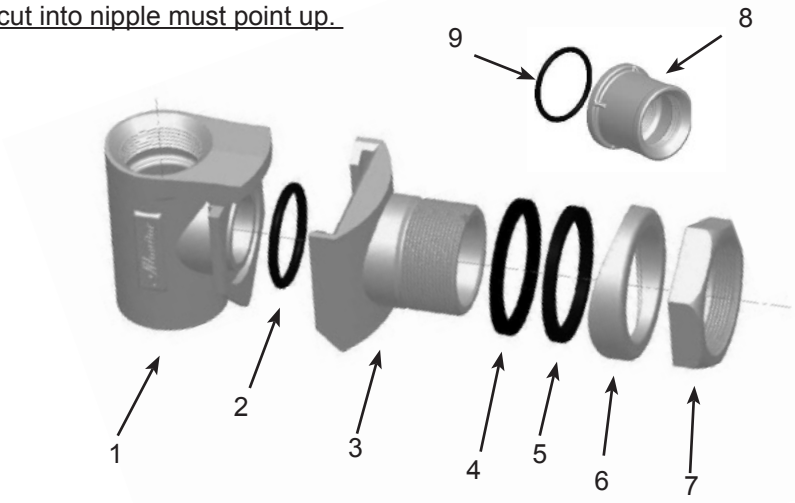
With the remaining assembled parts, screw a sufficient length of 1” pipe (hand tight) into the drop fitting (1) (removable male part). The bottom of the drop fitting (1) is tapered for fast and easy location of casing fitting (3). An elbow or tee with nipple(s) of sufficient length on the other end of the 1” pipe will prevent accidentally dropping the assembly down the well.

With the thinner inside gasket (4) in place on the casing fitting, using the 1” pipe, lower the assembly into the well, guiding the nipple through the hole in the casing. Notch cut into nipple must point up.

Slide the outside gasket (5) and collar washer (6) on the nipple. Screw the nut (7) (or 1-1/4” adapter coupling with o-ring(8&9)) on the nipple. With the 1” lift pipe inside the casing in a plumb position, securely tighten the nut (or 1-1/4” adapter coupling) with a wrench, until the gaskets are fully compressed. Push down on lift out pipe and separate drop fitting from casing fitting.

Employing the pitless adapter, install the pump in the well. (Nominal pump diameter to be at least 1” less than casing I.D.) Install the discharge piping. Complete the wiring and install code approved cap. **(Test the water system under operating pressure before backfilling the trench).**

WARNING: Failure to support drop pipe and lift pipe assembly during installation and service may result in serious injury and/or damage to inner assembly and pump.



						PRESSURIZED		
Item	Qty	Description	**1BT**	**100BT**	**125BT**	**1BPT**	**100BPT**	**125BPT**
Size			**1"**	**1"**	**1-1/4"**	**1"**	**1"**	**1-1/4"**
1	1	Drop Fitting	PA141T	PA143T	PA142T	PA141T	PA143T	PA142T
2	1	O-Ring	ORH10	ORH10	ORH10	ORH10	ORH10	ORH10
3	1	Casing Fitting	PA140T	PA140T	PA140T	PA140TP	PA140TP	PA140TP
4	1	Gasket, Inside	GI11T	GI11T	GI11T	GI11T	GI11T	GI11T
5	1	Gasket, Outside	GO21	GO21	GO21	GO21	GO21	GO21
6	1	Collar, Washer	PA144T	PA144T	PA144AT	PA144T	PA144T	PA144AT
7	1	Nut	PA139T	PA139T		PA139T	PA139T	
8	1	Adapter Coupling			PA138T			PA138T
9	1	O-ring			SE2224N70			SE2224N70

SANITARY ALL BRASS
PITLESS ADAPTERS FOR 6” TO 8” I.D. WELL SIZES
Installation Instructions

When the pipe trench is open, use a holesaw to cut a 2 -1/2” hole in the well casing at the desired bury depth, below the frost line. Remove any burr from the edges of the hole.

Remove the nut (7) , brass collar washer (6) and the outside gasket (5) from the pitless adapter.

To prevent losing casing fitting (3) down the well, pull apart drop fitting (1) and casing fitting (3) and re-assemble drop fitting(1) in reverse (upside down).

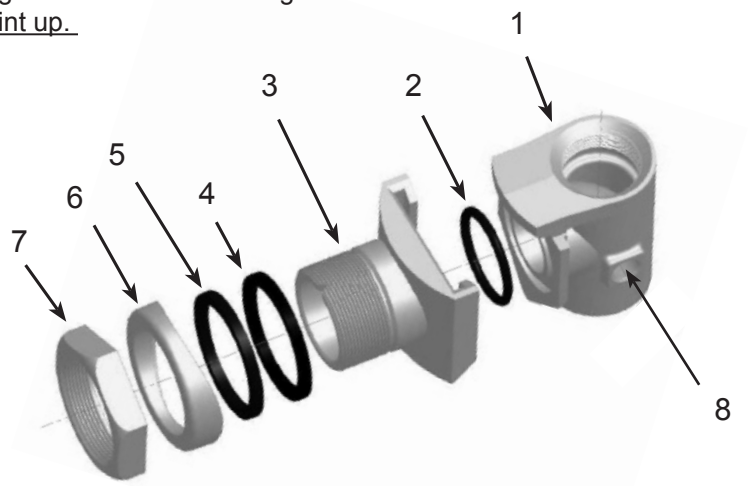
With the remaining assembled parts, screw a sufficient length of 1-1/2" pipe (hand tight) into the drop fitting (1) (removable male part). The bottom of the drop fitting (1) is tapered for fast and easy location of casing fitting (3). An elbow or tee with nipple(s) of sufficient length on the other end of the 1-1/2" pipe will prevent accidentally dropping the assembly down the well.

With the inside gasket (4) in place on the casing fitting, using the 1-1/2” pipe, lower the assembly into the well, guiding the nipple through the hole in the casing. Notch cut into nipple must point up.

Slide the outside gasket (5) and collar washer (6) on the nipple. Screw the nut (7) on the nipple. With the 1-1/2” lift pipe inside the casing in a plumb position, securely tighten the nut with a wrench, until the gaskets are fully compressed. Push down on lift out pipe and separate drop fitting from casing fitting.

Employing the pitless adapter, install the pump in the well. (Nominal pump diameter to be at least 1” less than casing I.D.) Install the discharge piping. Complete the wiring and install code approved cap. **(Test the water system under operating pressure before backfilling the trench).**

WARNING: Failure to support drop pipe and lift pipe assembly during installation and service may result in serious injury and/or damage to inner assembly and pump.



					PRESSURIZED	
Item	Qty	Description	**150BT**	**150BTC**	**150BPT**	**150BPTC**
Size			**1-1/2"**	**1-1/2"**	**1-1/2"**	**1-1/2"**
1	1	Drop Fitting	PA155M	PA155MT	PA155M	PA155MT
2	1	O-Ring	SE2328C70	SE2328C70	SE2328C70	SE2328C70
3	1	Casing Fitting	PA150M	PA150M	PA150MP	PA150MP
4	1	Gasket, Inside	G150	G150	G150	G150
5	1	Gasket, Outside	G150	G150	G150	G150
6	1	Collar, Washer	PA154	PA154	PA154	PA154
7	1	Nut	PA159	PA159	PA159	PA159
8				1/4" NPT		1/4" NPT

SANITARY ALL BRASS
PITLESS ADAPTER FOR 5" to 8" I.D. WELL SIZE
Installation Instructions

When the pipe trench is open, use a holesaw to cut a 2 -1/2” hole in the well casing at the desired bury depth, below the frost line. Remove any burr from the edges of the hole.

Remove the nut (7) , brass collar washer (6) the outside gasket (5) and the drop fitting (1) from the pitless adapter. ***Please note: for installation the drop fitting (1) must be removed from casing fitting(3) or the unit will not fit in the 5" casing***

To prevent losing casing fitting (3) down the well, attach the casing fitting to the installation tool (PA199).

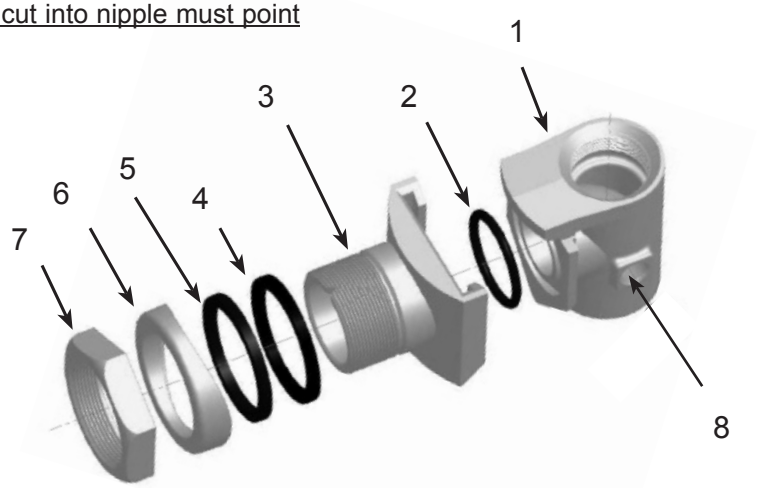
Screw a sufficient length of 3/4" pipe (hand tight) into the installation tool. An elbow or tee with nipple(s) of sufficient length on the other end of the 3/4" pipe will prevent accidentally dropping the assembly down the well.

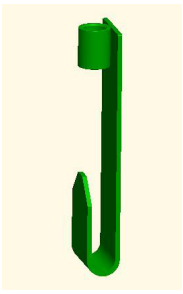
With the inside gasket (4) in place on the casing fitting (3), using the installation tool, lower the casing fitting (3) with gasket (4) into the well, guiding the nipple through the hole in the casing. Notch cut into nipple must point up.

Slide the outside gasket (5) and collar washer (6) on the nipple. Screw the nut (7) on the nipple. With the 3/4” lift pipe inside the casing in a plumb position, securely tighten the nut with a wrench, until the gaskets are fully compressed. Push down on lift out pipe and separate installation tool from casing fitting.

Employing the pitless adapter, install the pump in the well. (Nominal pump diameter to be at least 1” less than casing I.D.) Install the discharge piping. Complete the wiring and install code approved cap. **(Test the water system under operating pressure before backfilling the trench).**

WARNING: Failure to support drop pipe and lift pipe assembly during installation and service may result in serious injury and/or damage to inner assembly and pump.

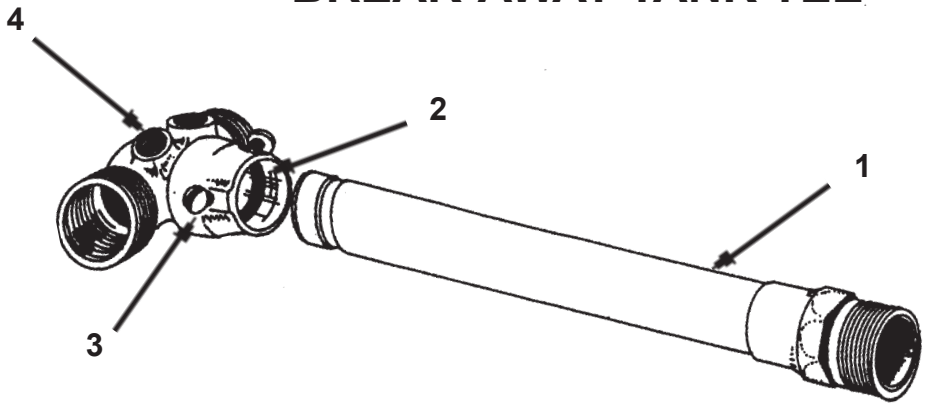




Installation Tool
PA199

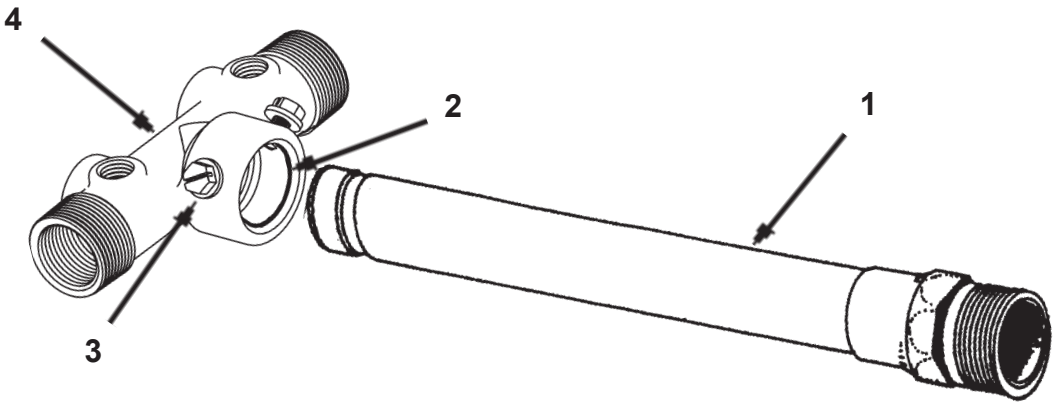
					PRESSURIZED	
Item	Qty	Description	**150BT**	**150BTC**	**150BPT**	**150BPTC**
Size			**1-1/2"**	**1-1/2"**	**1-1/2"**	**1-1/2"**
1	1	Drop Fitting	PA155M	PA155MT	PA155M	PA155MT
2	1	O-Ring	SE2328C70	SE2328C70	SE2328C70	SE2328C70
3	1	Casing Fitting	PA150M	PA150M	PA150MP	PA150MP
4	1	Gasket, Inside	G150	G150	G150	G150
5	1	Gasket, Outside	G150	G150	G150	G150
6	1	Collar, Washer	PA154	PA154	PA154	PA154
7	1	Nut	PA159	PA159	PA159	PA159
8				1/4" NPT		1/4" NPT

BREAK-AWAY TANK TEE



1" Tee with One 1/2" Port and two 1/4" Ports

Model No.	Item 1 Copper Tube with Fitting	Item 2 O-ring	Item 3 Lock Screw	Item 4 Tee Head
1BAT80M	C80M	TOR1	E90SS.5	THS1T
1BAT260M	C260	TOR1	E90SS.5	THS1T
1BAT311M	C311	TOR1	E90SS.5	THS1T
1BAT00	C00	TOR1	E90SS.5	THS1T
1BAT80F	C80F	TOR1	E90SS.5	THS1T
1BAT210M	C210	TOR1	E90SS.5	THS1T



1" Tee with Two 1/2" Ports and Two 1/4" Ports

Model No.	Item 1 Copper Tube with Fitting	Item 2 O-ring	Item 3 Lock Screw	Item 4 Tee Head
1BAT82F	C80F	TOR1	E90SS.5	THF1AT
1BAT82M	C80M	TOR1	E90SS.5	THF1AT
1BAT262M	C260	TOR1	E90SS.5	THF1AT
1BAT312M	C311	TOR1	E90SS.5	THF1AT
1BAT02	C00	TOR1	E90SS.5	THF1AT

1-1/4" Tee with Two 3/4" Ports and Two 1/4" Ports

Model No.	Item 1 Copper Tube with Fitting	Item 2 O-ring	Item 3 Lock Screw	Item 4 Tee Head
12BAT82F	CA82F	TOR125	E90SS.5	THF125AT
12BAT82M	CA82M	TOR125	E90SS.5	THF125AT
12BAT387M	CA387M	TOR125	E90SS.5	THF125AT
12BAT334M	CA334M	TOR125	E90SS.5	THF125AT

INSTALLATION INSTRUCTIONS

1. All pitless unit cases are joined by threading or welding either to well casing or adapter.

   Where there is a change in size between pitless unit casing diameter and well casing diameter and well casing diameter an adapter must be threaded to pitless unit case.

2. Establish ground level at the well location. It is desirable to have ground slope away from pitless unit case in all directions.

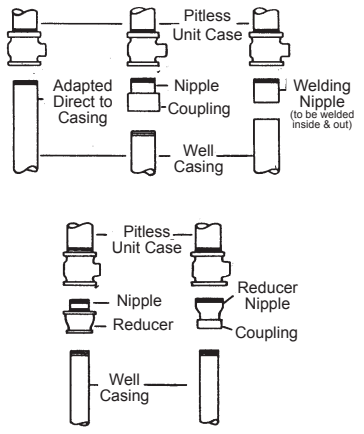
3. The pitless unit case should extend above the ground level according to state well code. To accomplish this the well casing must be cut off at a distance below the ground level equal to the distance above ground less than the pitless unit case length. Take into account the method of adaption.*

4. In order to do work, excavate around the well casing according to government regulations where well casing is to be cut off.

5. Cut off the well casing perpendicular to well casing axis.

6. The spool should now be removed from the case - to do this use a piece of 1-1/4" pipe with a thread on one end and a length of 2' or 3' longer than pitless unit. Remove seal cap - insert the threaded end of the pipe inside the case and into the end of the spool. Screw hand tight, then place a block of wood against the lower end of the spool casting and strike the block with a fairly heavy object and pull on the pipe which will remove the spool from the pitless case.

Female Threaded Discharge Adaption



7. Lower the pitless case in place, rotate the discharge outlet to the desired angle. Rotating 90° to discharge line and using 90° elbow will allow any movement of the discharge line with undue stress at the discharge line connection.

8. Lower submersible pump and drop pipe into casing. Screw spool onto drop pipe. Holes are provided in the spool through which the pump motor cable may be passed.

9. Wipe the rubber "O" ring seals with a clean cloth and then coat with a heavy layer of petroleum jelly (vaseline) for proper seating of rings. Lower the entire assembly into pitless unit case.

10. Remove the 1-1/4" pipe. Install the cap. Connect discharge outlet to water system and complete wiring.

11. The unit is now ready to operate under power and should be run a sufficiently long time to see that there are no leaks in the discharge pipe.

    The hole should not be filled in until the unit is running satisfactorily. Care should be exercised to fill under discharge line properly before back filling.

MONITOR® KWIK CONNECT

Monitor PS Units with Kwik Connect on the bottom of the discharge body require no threading or welding.

TO INSTALL:

1. Cut off the well casing at the desired point. See Step 3.

2. Use a file to remove any burrs from the top of well casing after it is cut.

3. Loosen the bolts on the bottom of the discharge body, and slide the unit onto the well casing.

4. Tighten all the bolts equally.

Monitor® PS

Spool Type Pitless Units for 4", 5" & 6" I.D. Wells

Figure 1

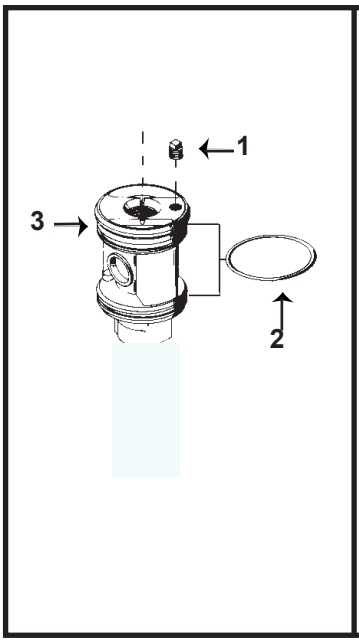


Figure 2

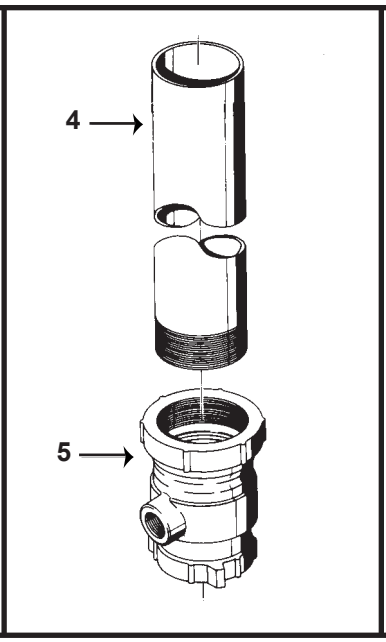
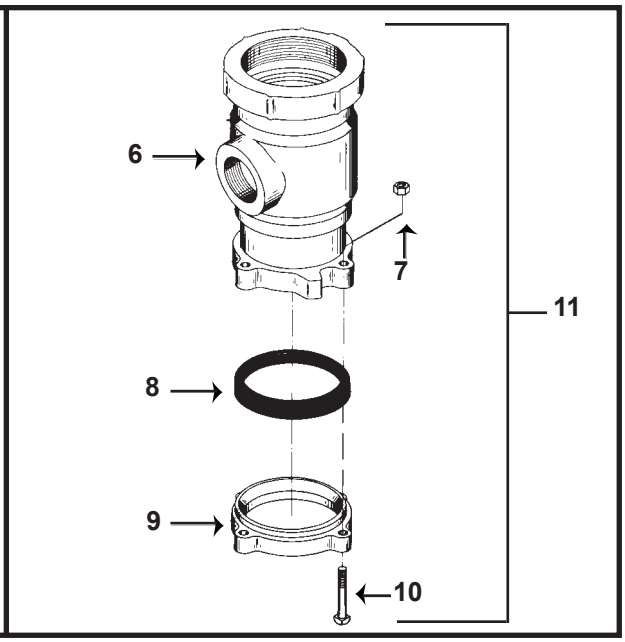


Figure 3



The drawings and parts list apply to the model numbers listed below including those with either a B, N, or a BN after the Upper Case Size.

MODEL NUMBERS

Note: Lift out pipe size 1 1/4"

Bury Depth	Unit	Well Tapping Size	Upper Case Size	Spool	Cap	* Item 4
2' to 8'	PS	4"	5"	S4	C0	Pitless Case is 5" I.P.S. - 8 NPT - Bury depth plus 10"
2' to 8'	PS	5"	6"	S4	C0	Pitless Case is 6" I.P.S. - 8 NPT - Bury depth plus 10"
2' to 8'	PS	6"	7"	S4	C0	Pitless Case is 7" I.P.S. - 8 NPT - Bury depth plus 10"

Spool Type Pitless Units for 4", 5" & 6" I.D. Wells					
Model No.			**4" I.D.**	**5" I.D.**	**6" I.D.**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	1	Pipe Plug, 3/8-18 NPT galv. steel	UN122	UN122	UN122
2	2	O-Ring	UB15	NC15	UC15
3	1	Spool -Thrd Dischg-Fig. 2, includes #1,2 & 3	5S4PS	6S4PS	7S4PS
3	1	Spool-Kwik. Dischg-Fig. 3, includes #1,2 & 3	5S4PSN	6S4PS	7S4PS
4	1	Pitless Case See Above	*	*	*
5	1	Discharge Body Threaded Unit	UB163	UE44	UC254
6	1	Discharge Body Kwikonect Unit	UB83	UE34	UC294
7	4	Hex Nut 1/2" - 13NC	PC433	PC433 (5)	PC433 (6)
8	1	Seal Ring	PS164	PS165	PS166
9	1	Depression Ring	UB190	UE96	UC285
10	4	Bolt, 1/2"-13NC x 3" L.	UB201	UB201 (5)	UB201 (6)
11	--	Kwikonect Discharge Body Assembly Includes Item #'s 6 - 10 assembled	UB450	UE560	UC670

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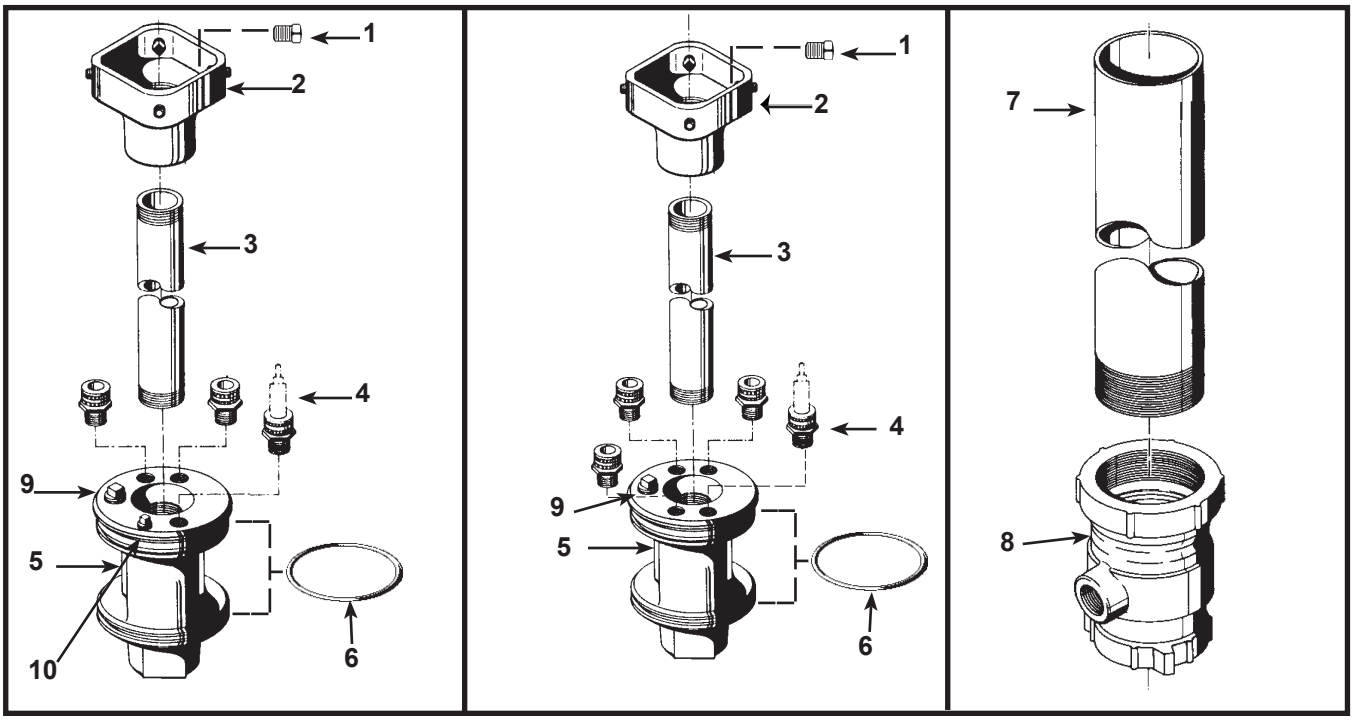
Monitor® PS

Spool Type Pitless Units for 4", 5" & 6" I.D. Flowing Wells

Figure 1 for 4" Wells **Figure 2 for 5" & 6" Wells** **Figure 3**



The drawings and parts list apply to the model numbers listed below including those with a B after the Upper Case Size.

Note: Lift out pipe size 1 1/4"

MODEL NUMBERS

Bury Depth	Unit	Well Size Tapping	Upper Case Size	Spool	Cap	Flowing Well	* Item 7
2' to 8'	PS	4"	5"	S4	C0	F	Pitless Case is 5" I.P.S. - 8 NPT - Bury depth plus 10"
2' to 8'	PS	5"	6"	S4	C0	F	Pitless Case is 6" I.P.S. - 8 NPT - Bury depth plus 10"
2' to 8'	PS	6"	7"	S4	C0	F	Pitless Case is 7" I.P.S. - 8 NPT - Bury depth plus 10"

Spool Type Pitless Units for 4", 5" & 6" I.D. Flowing Wells

Model No.			4" I.D.	5" I.D.	6" I.D.
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	4	Set Screw, 3/8-16NC x 1-3/4" L. Cup Point	YC225	PC288	YC225
2	1	Hold-Down Assembly (Includes 1 & 2)	120UB	10UE	160UC
3	1	Hold-Down Pipe, 1-1/4" I.P.S.-11-1/2 NPT.	Length = Pitless Unit Bury Depth + 7"		
4	3-4	Spool Cable Seals See Fig. 1 & 2	See Catalog	See Catalog	See Catalog
5	1	Spool, includes #6	5S4PSF	6S4PSF	7S4PSF
6	2	O-Ring	UB15	NC15	UC15
7	1	Pitless Case See Above	*	*	*
8	1	Discharge Body	UB163	UE44	UC254
9	1	Pipe Plug, 3/8-galv steel	UN122	UN122	UN122
10	1	Brass Screw Plug 1/8"	PS46		

Monitor® PS

Spool Type Pitless Units for 4", 5" & 6" I.D. Wells with Pressurized Casing Connection

Figure 1

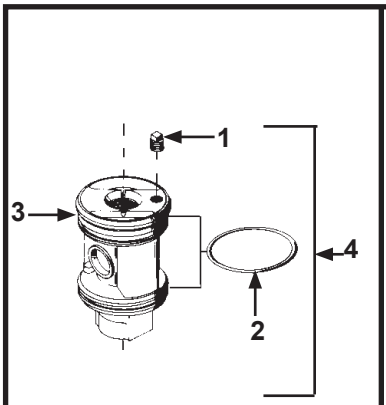


Figure 2

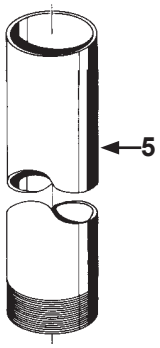
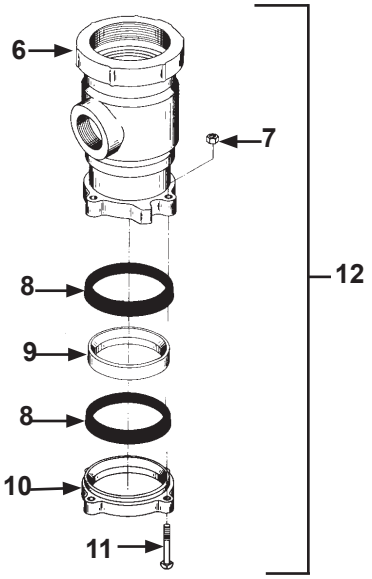


Figure 3



The drawings and parts list apply to the model numbers listed below including those with a P after the Upper Case Size.

MODEL NUMBERS

Bury Depth	Unit	Well Size Tapping	Upper Case Size	Cap	Spool	* Item 5
2' to 6'	PS	4"	5"	W	E0	Pitless Case is 5" I.P.S. - 8 NPT - Bury depth plus 10"
2' to 6'	PS	5"	6"	W	E0	Pitless Case is 6" I.P.S. - 8 NPT - Bury depth plus 10"
2' to 6'	PS	6"	7"	W	E0	Pitless Case is 7" I.P.S. - 8 NPT - Bury depth plus 10"

Note: Lift out pipe size 1 1/4"

Spool Type Pitless Units for 4", 5" & 6" I.D. Wells w/ Pressurized Casing Connection					
Model No.			**4" I.D.**	**5" I.D.**	**6" I.D.**
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	1	3/8" Steel plug	UN122	UN122	UN122
2	2	"O" Ring	UB15	NC15	UC15
4	1	Spool Assembly, includes #'s 1-3	5S4PSN	6S4PS	7S4PS
5	1	Pitless Case	*	*	*
6	1	Discharge Body	UB334	UE234	UC334
7	4	Hex Nut 1/2"-13NC	PC433	PC433 (5)	PC433 (6)
8	2	Seal Ring	PS164	PS165	PS166
9	1	Inner Depression Ring	UB88	UE197	UC288
10	1	Depression Ring	UB89	UE196	UC289
11	4	Bolt, 1/2"-13NC x 4-1/2" L.	PS220		
11	5	Bolt, 1/2"-13NC x 5" L.		PS219	PS219 (6)
12	1	Kwikonect Assembly, includes #'s 6-11	UB450M	UE560M	UC670M

Note: ( ) designates quantity for that unit.

Monitor® PS

Double Kwik Connect Kits for 4" & 5" Wells

Figure 1

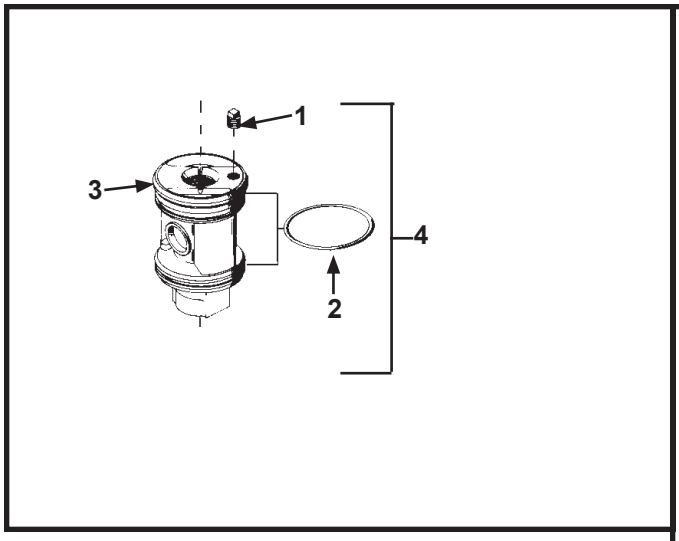
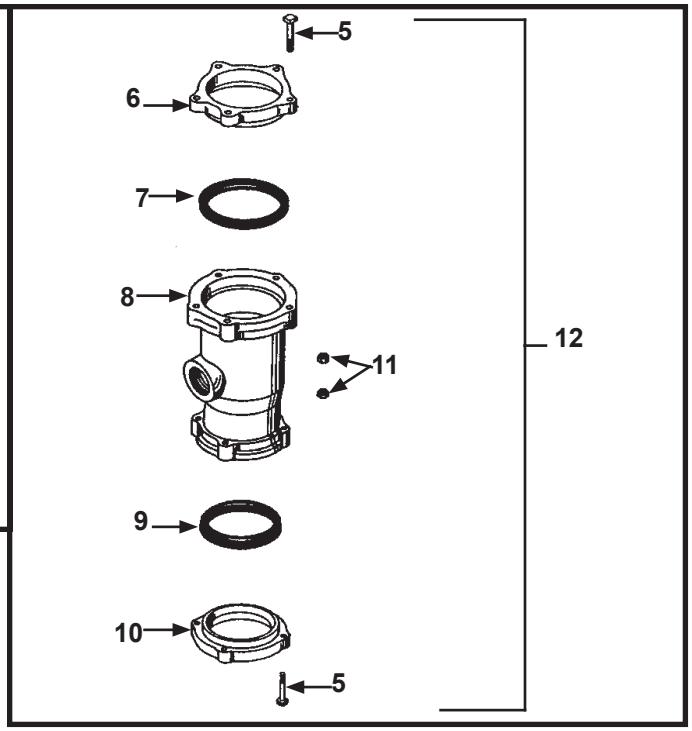


Figure 2



MODEL NUMBERS

Model No.	Lower Well Size	Upper Case Size	Spool
DQ400	4"	5"	S4
DQ500	5"	6"	S4

Double Kwik Connect Kits for 4" & 5" Wells				
Model No.			**4" I.D.**	**5" I.D.**
Item	Qty	Description	Ord. No.	Ord. No.
1	1	3/8" Steel Plug	UN122	UN122
2	2	5" "O" Ring	UB15	NC15
3	1	Spool	UB225	YC313
4	1	Spool Assembly - Figure 1	5S4PSN	6S4PS
5	9	Bolt, 1/2" - 13NC x 3" L.	UB201	UB201 (11)
6	1	Depression Ring	UE96	UC285
7	1	Seal Ring	PS165	PS166
8	1	Discharge Body	UB383D	UE383D
9	1	Seal Ring	PS164	PS165
10	1	Depression Ring	UB190	UE96
11	9	Hex Nut 1/2" x 13NC	PC433	PC433 (11)
12	1	Discharge Body Assembly - Figure 2	UB450D	UE560D

Note: ( ) designates quantity for that unit.

NOTE: Customer provides upper casing, Sch. 40 steel or SDR26 PVC. I.D. of PVC pipe may vary. Always make sure spool will pass through pipe before cutting upper casing.

Monitor®

HUSKY PITLESS UNIT

Installation Instructions

To Install Husky Pitless Unit:

1. Establish ground level at well location. It is desirable to have ground slope away in all directions.
2. In order to perform installation you must excavate around the casing per your governing OSHA or State regulation for Trenching and Excavating. The OSHA regulation is 1926.650-652 Trenching and Excavating. Contact your local officials for state regulations.
3. Determine the necessary amount of casing to cut off. Reference your state well code for guidance. Most states require the well casing to extend at least 12" above grade.
4. Cut off the well casing perpendicular to the well casing centerline.
5. Attach proper coupling to casing for pitless unit installation.
6. Prepare Husky Pitless Unit for installation by removing lid of well cap and inner drop fitting assembly. The inner drop fitting assembly consists of support plate, support rods, actuator rod, actuator, and brass discharge fitting factory assembled as a unit. To remove inner drop fitting assembly, lift actuator rod to disengage and rest actuator rod end in dimple located on support plate. With actuator rod safely engaged in support plate dimple, the inner assembly will easily slide out of pitless case.
7. Lower the pitless case into place and rotate the discharge outlet to the desired location. NOTE: this joint must be watertight and it is essential that the center line of the pitless unit case and well casing be the same.
8. To install pump, assemble and lower the drop pipe starting with the pump and stopping with the drop pipe supported just above the well casing. Coat the Neoprene "O" ring located on the discharge fitting snout with clean NSF approved Petroleum Jelly. Securely supported by pump hoist, screw drop pipe into bottom of inner drop fitting assembly and slowly lower into the pitless unit case.
9. To properly align inner drop fitting assembly within the pitless unit case, the alignment tab, located on the bottom side of support plate, should rest within the alignment notch located on top of pitless unit case.
10. Release the actuator rod to engage the inner drop fitting assembly discharge snout into the stainless steel discharge receiver. Push down on the actuator rod to ensure proper engagement.
11. To complete the well, connect the discharge outlet to the water system, complete the wiring, and cap the well. Allow the water system to run a sufficient length of time to ensure there are no leaks.
12. Carefully backfill around pitless unit.

To Pull The Pump Supported By Husky Pitless Unit:

1. Disconnect power to the well and remove the upper part of well cap.
2. Screw 1" pull pipe into support plate and attach to a hoist.
3. Disengage inner drop fitting assembly by lifting up on actuator rod and resting end in dimple located on support plate.
4. The inner drop fitting assembly, along with drop pipe and pump, may now be slowly withdrawn from the well. WARNING: Failure to properly support inner drop fitting assembly, drop pipe, and pump may result in loss of drop pipe and pump and/or serious injury.

Note: Improper Chlorination can lead to corrosion problems.

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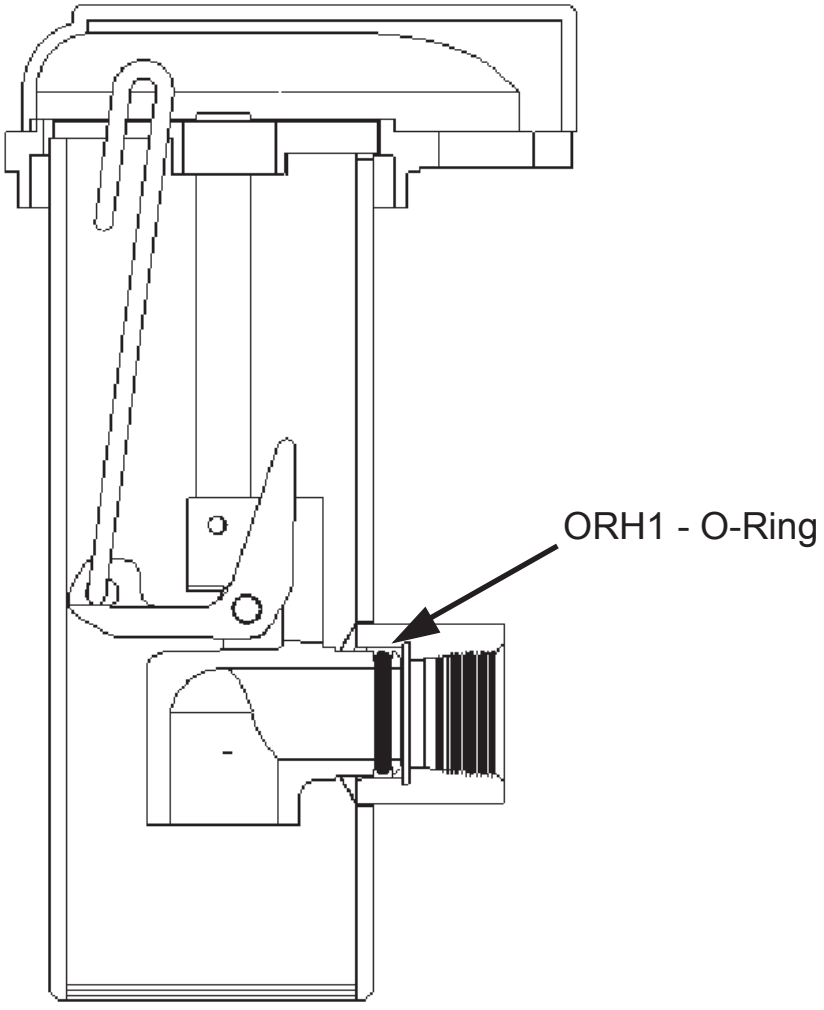
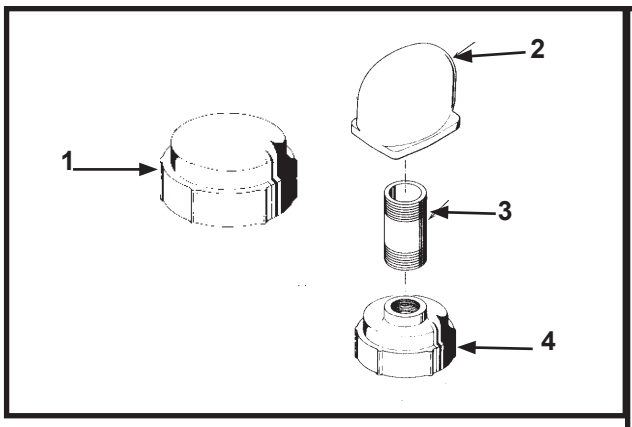
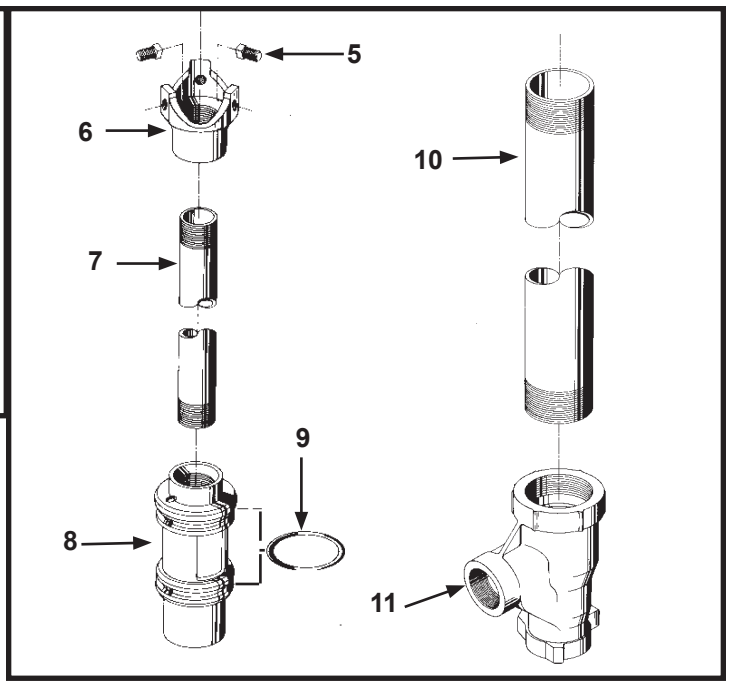
HUSKY PITLESS UNIT



Monitor® PJ

Spool Type Pitless Units for 2"Wells - Deep Well, Flowing Well & Shallow Well





The drawings and parts list apply to the model numbers listed below including those with a B, C or W in the model number.

(A) MODEL NUMBERS FOR SINGLE PIPE JET PUMPS

Bury Depth	Unit	Well Size Tapping	Upper Case Size	Spool
2' to 8'	PJ	2"	3"	X11
2' to 8'	PJ	2"	3"	X112

(B) MODEL NUMBERS FOR FLOWING WELLS USING SHALLOW WELL PUMP

Bury Depth	Unit	Well Size Tapping	Upper Case Size	Concentric Pipe	Spool	Flowing Well
2' to 8'	PJ	2"	3"	C	X11	F
2' to 8'	PJ	2"	3"	C	X112	F

(C) MODEL NUMBERS FOR SHALLOW WELL PUMP

Bury Depth	Unit	Well Size Tapping	Upper Case Size	Spool
2' to 8'	PJ	2"	3"	E11
2' to 8'	PJ	2"	3"	E112

Model No.			(A) Deep Well	(B) Flowing Well	(C) Shallow Well
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	1	Seal Cap	NA31	NA31	
2	1	Screen Vent			PS247
3	1	Galvnaized Nipple			PN13
4	1	Seal Cap-Tapped			NA31P
5	3	Set Screw 3/8-16NC x 1/2" L.	NA39	NA39	NA39
6	1	Hold Down Ftg, includes #"s 5 & 6 Assd	NA17	NA17	NA17
7	1	Hold Down Pipe	Hold-Down is 1" I.P.S. - 11-1/2"NPT - Bury Depth plus 7-15/16"		
8	1	Spool	NA80	NA80	NA40
9	2	"O" Ring	NA115	NA115	NA115
10	1	Pitless Case	Pitless Case is 3" I.P.S. - 8 NPT - Bury Depth plus 10"		
11	1	Discharge Body-1" Suction Tap	NA333		
11	1	Discharge Body-1-1/4" Suction Tap	NA233	NA234	NA234

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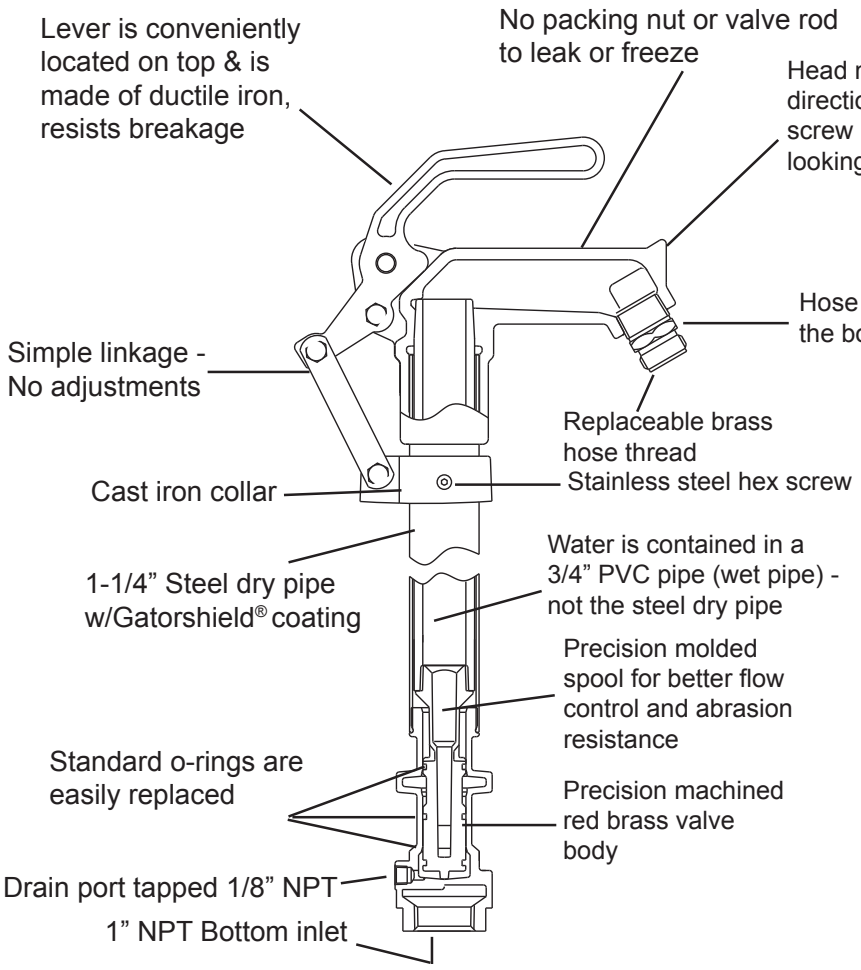
OM4004 (10/1/08)

O-RING SELECTION GUIDE FULL PITLESS UNITS

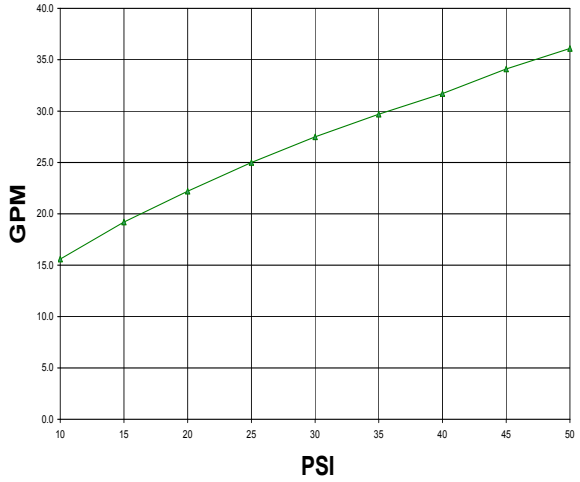
Model (Well Size X Upper Case Size	O-Ring Part No.	Inside Diameter	Thickness
2 x 3	NA115	2.350 ± .018	.210 ± .005
3 x 4	NB15	3.400 ± .015	.210 ± .005
4 x 5	UB15	4.10 ± .028	.210 ± .005
4 x 8	UB15	4.10 ± .028	.210 ± .005
5 x 6	NC15	5.10 ± .037	.275 ± .006
5 x 8	NC15	5.10 ± .037	.275 ± .006
5.6 x 7	UC15	5.975 ± .037	.275 ± .006
6 x 7	UC15	5.975 ± .037	.275 ± .006
6.6 x 7	UC15	5.975 ± .037	.275 ± .006
6 x 8	UH15	6.975 ± .040	.275 ± .006
7 x 8	UH15	6.975 ± .040	.275 ± .006
8 x 10	UG15	8.475 ± .055	.275 ± .006
10 x 12	UJ15	10.550 ± .030	.375 ± .010
12 x 14	UK15	11.540 ± .030	.375 ± .010
14 x 16	UL15	13.110 ± .030	.500 ± .020
16 x 18	UM15	14.900 ± .030	.625 ± .022
18 x 20	UN15	16.840 ± .030	.625 ± .022
20 x 22	UQ15A	18.550 ± .030	.625 ± .022
24 x 26	UR15A	22.430 ± .030	.625 ± .022
26 x 28	US15A	24.600 ± .030	.625 ± .022
36 x38	UU15	33.915 $\pm$ .030	.625 $\pm$ .022

FROST-PROOF HYDRANT

Monitor Hydrant is the only hydrant with all of these features!


Lever is conveniently located on top & is made of ductile iron, resists breakage
No packing nut or valve rod to leak or freeze
Head may be rotated to any direction by loosening set screw in collar, turn clockwise looking down on the head.
Hose Bibb is 2 feet plus bury depth to the bottom inlet port
Simple linkage - No adjustments
Replaceable brass hose thread
Stainless steel hex screw
Cast iron collar
1-1/4" Steel dry pipe w/Gatorshield® coating
Water is contained in a 3/4" PVC pipe (wet pipe) - not the steel dry pipe
Precision molded spool for better flow control and abrasion resistance
Standard o-rings are easily replaced
Precision machined red brass valve body
Drain port tapped 1/8" NPT
1" NPT Bottom inlet

Flow Capacity of Magnum Hydrant



INSTALLATION

Proper installation is essential for satisfactory operation of any hydrant, regardless of make. **Adequate provision must be made for proper drainage in cold weather and this is best accomplished by the use of an adequate bed of gravel or pea rock, under and around hydrant**. Plastic sheeting placed over gravel will prevent seepage of dirt into gravel to plug the spaces. If ground water table is high or hydrant elevation is lower than supply line you **must** run a drain tile from vicinity of hydrant.

Patent #6,178,988 B1

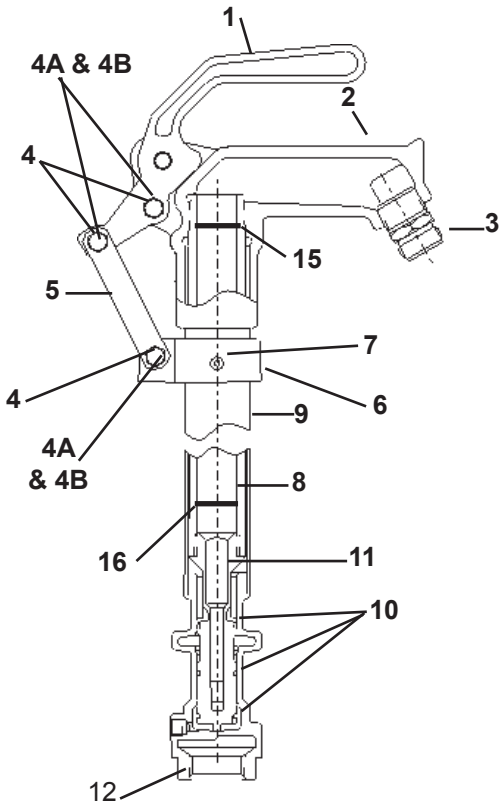
MAINTENANCE

The absence of adjustments, plus the unique construction of your Monitor Hydrant makes maintenance very simple and easy. The only parts requiring replacement, under normal conditions, will be the three O-rings. No large pipe wrenches needed.

TO REPLACE O-RINGS

1. Turn off the water supply.
2. Loosen the hex screw in the collar.
3. Pull out PVC wet pipe.
4. Replace o-rings.
5. Apply a thin coat of vaseline on the o-rings.
6. Hydrant stand pipe **must** be completely drained.
7. Install wet pipe back in hydrant stand pipe.
8. Handle **must** be in closed position.
9. Bottom out the head casting on the stand pipe.
10. Rotate the head casting outlet clockwise looking down on the head to the direction you want it.
11. Make sure collar is perpendicular with stand pipe.
12. Tighten hex screw - Do Not Overtighten.

FROST-PROOF HYDRANT



IMPORTANT NOTICE

When using a garden hose, an automatic vacuum breaker must be installed.

Item	Qty	Description	Model No.
1	1	Handle	H215D
2	1	Head Assembly (Includes Items 1 thru 7)	10-174A
3	1	Hose Adapter-NPT	H211A
4	3	Bolt 1/4-20X1.25	E90HC1.2
4A	3	Nut 1/4-20 Locking	DP49W
4B	2	Washer 1/4" Flat	UN243W
5	2	Linkage straps	H228
6	1	Collar	H230AFRO
7	1	Set Screw only 5/16UNCX.375 SS	PS355W1
8	1	Wet Pipe	*WP75
9	1	Dry Pipe	DRPT*
10	3	O-rings - 115 PTFE coated 70 durometer	SE2115N71
11	1	Spool & O-Rings	H220DA
12	1	Brass Valve Body	H222WMFRO
15	1	1 x .75 Reducer Bushing PVC	YH175
16	1	.75 Coupling PVC	YH7575

*Add appropriate bury depth after this part number (example: -1 for 1 foot or -2 for 2 foot etc.)

Patent #6,178,988 B1

The following are available as REPLACEMENTS ONLY:

SE2115N90	90 durometer o-ring
H220DAX	spool & o-rings with drain holes

WARRANTY STATEMENT

Baker warrants the goods manufactured by it to be free from defects in material or workmanship under normal use or service, for a period of one year from date of shipment.

This warranty does not apply to goods or parts not manufactured by Baker, instead Baker's obligation for these goods or parts is limited to the actual warranty extended to Baker by the manufacturer.

All warranties herein are void and do not apply if: 1) the goods or parts have been altered or repaired by others; 2) the goods have not been installed or used in accordance with any applicable instructions or limitations provided by Baker, or the manufacturer of the good or part; 3) the goods or parts have not been installed or used in accordance with the goods or parts normal use and service; or 4) the goods are used in nuclear facility applications.

BAKER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES OF ANY KIND WITH RESPECT TO THE GOODS, PARTS AND MATERIALS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY AS TO MERCHANTABILITY OR AS TO THE FITNESS OF THE MERCHANDISE FOR A PARTICULAR USE AND SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH MERCHANDISE OR FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES.

HAND PUMP INSTALLATION INSTRUCTIONS - 11HA

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure.

1. Attach HA52 pump rod to end of pump rod from well using a 7/16 x 7/16 rod coupling.

2. Slip pipe flange (must be ordered separately) over well casing.

3. Guide HD pump base over pump rod and attach to 1-1/4" drop pipe in well. Note: Base is internally tapped 1-1/4" NPT.

4. Place HA152 cap assembly over pump rod and onto top of base and align in direction you wish the handle to operate from (normally 180° from spout).

5. Tighten the (2) PS110 set screws securely.

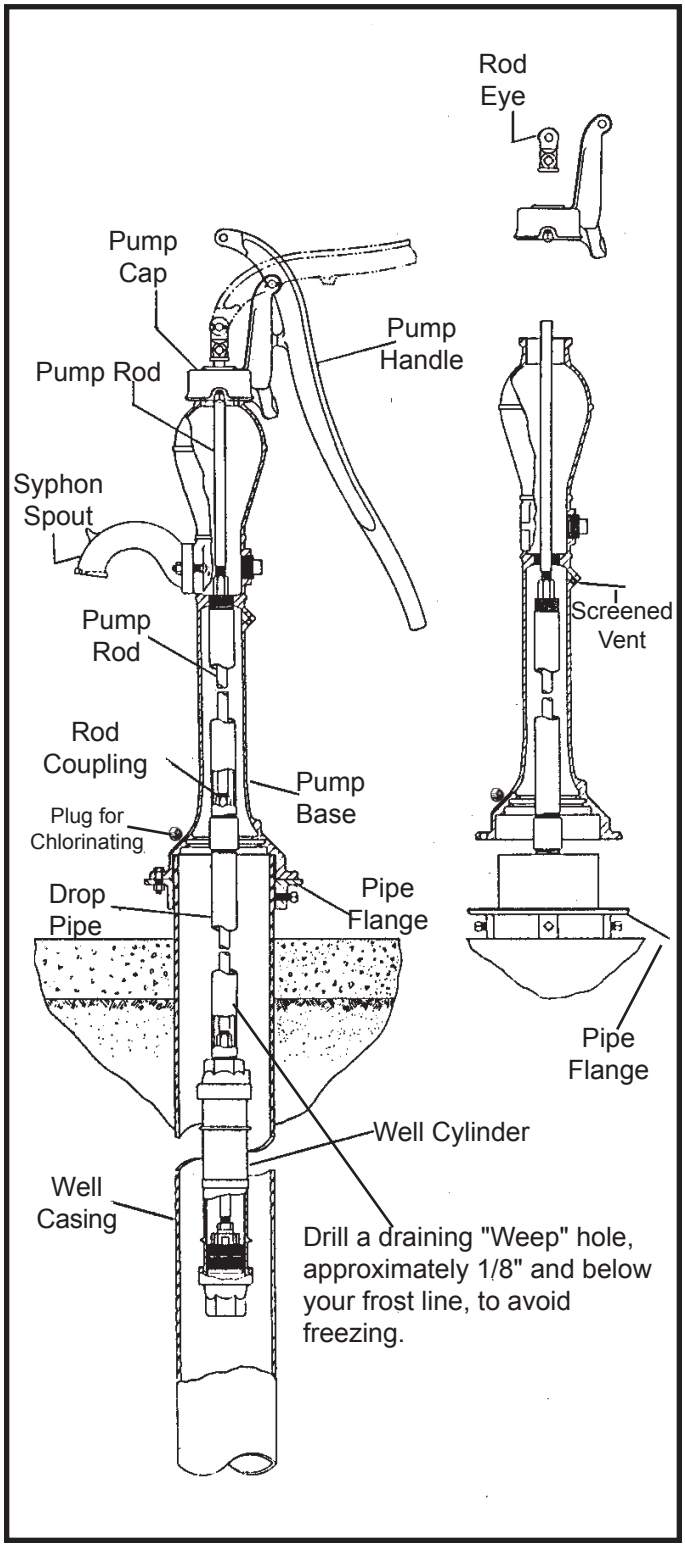
6. Slip rod eye of HA153 pump handle assembly onto HA52 pump rod and tighten HF30 set screw securely.

7. Position pump handle into slot of pump cap HA152 and insert EP54 thru pump cap and handle. Secure pin with HF57 cotter pin.

8. Check for plunger striking bottom or top of cylinder with the pump handle in extreme upper or lower position respectively. Some adjustment in length of the Drop Pipe or Pump Rod may be required.

9. Lower pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing.

10. Attach gasket (O80) and siphon spout (O9) to pump base using carriage bolts (HD70) and hex nuts (UB17).



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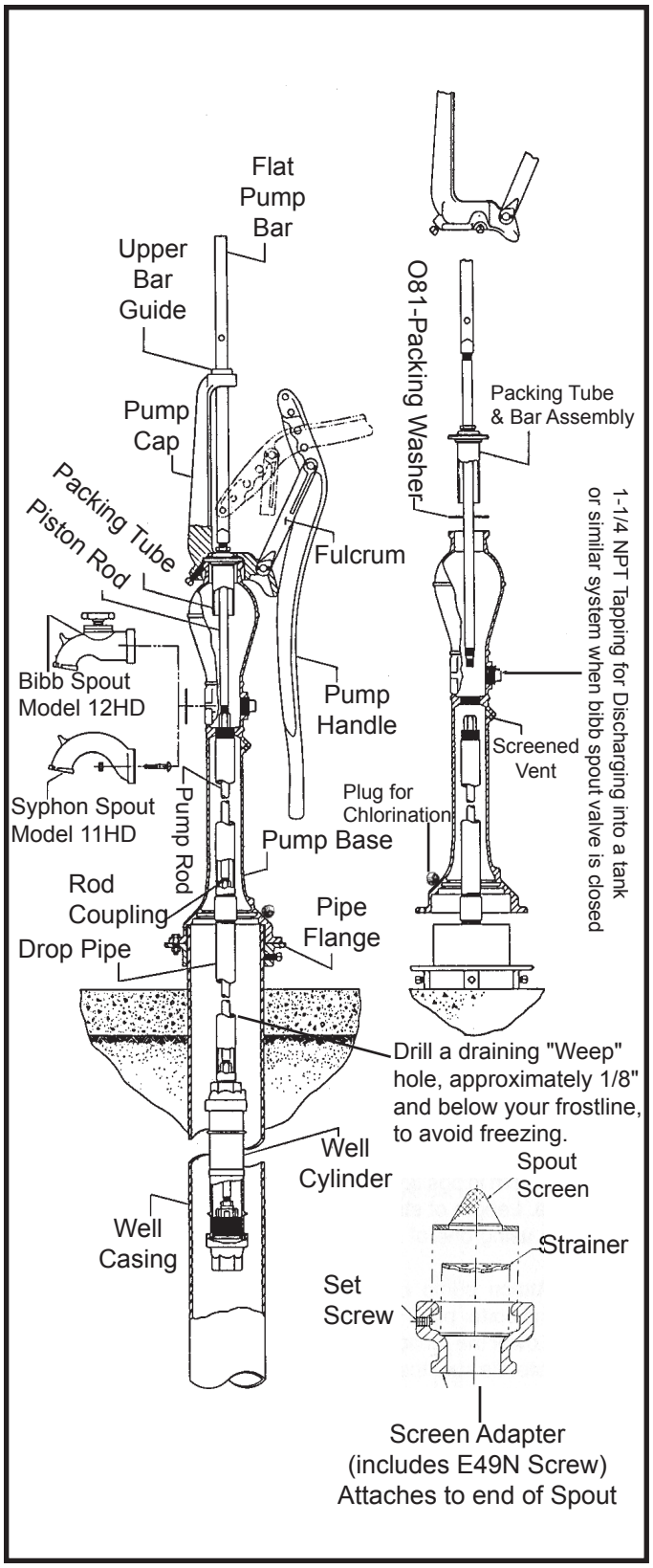
D529A (10/1/08)

HAND PUMP INSTALLATION INSTRUCTIONS - 11HD & 12HD, 11HDA & 12HDA

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure.

1. Slip pipe flange (must be ordered separately) over well casing. Flange not required but may be used if preferred.
2. Unless already assembled, screw a 7/16 x 7/16 rod coupling to top of pump rod.
3. Guide pump base over pump rod and attach base securely to drop pipe. Note: Base is internally tapped 1-1/4" NPT. on 11HD & 12HD, 2" NPT. on 11HDA & 12HDA.
4. Position rubber packing washer (O81) onto top of pump base.
5. Attach bottom of round piston rod, of piston bar and packing tube assembly, to the 7/16 x 7/16 rod coupling attached to top of pump rod. Note: When tightening, grip the piston rod as close to the rod coupling as possible so as not to damage the rod surface that passes through packing tube assembly.
6. Guide flat bar through pump cap (O200) and upper guide (O460) and attach pump cap to base by tightening the 3 set screws uniformly and securely.
7. Attach pump handle to fulcrum (O400) using hole in pump handle as shown on drawing. In this position there will be a 10" stroke. Length of stroke may be varied to 7-1/2 inches or 5 inches simply by using one of the other holes available in pump handle.
   Note: Check for cylinder plunger striking bottom or top of cylinder with pump handle in extreme upper or lower position respectively. Some adjustment in length of the drop pipe or pump rod may be required to utilize the 10 inch stroke.
8. Lower the pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing.
9. Attach syphon spout (O9 for 11HD & 11HDA) or bibb spout (O7 for 12HD & 12HDA) along with gasket (O80) to base using the 2 carriage bolts and nuts furnished.
10. Attach screen adapter assembly HPS (HD189, DP31, HD190) to end of spout, 1/4 turn and tighten set screw to lock to spout.



HAND PUMP INSTALLATION INSTRUCTIONS - 11HDS & 12HDS

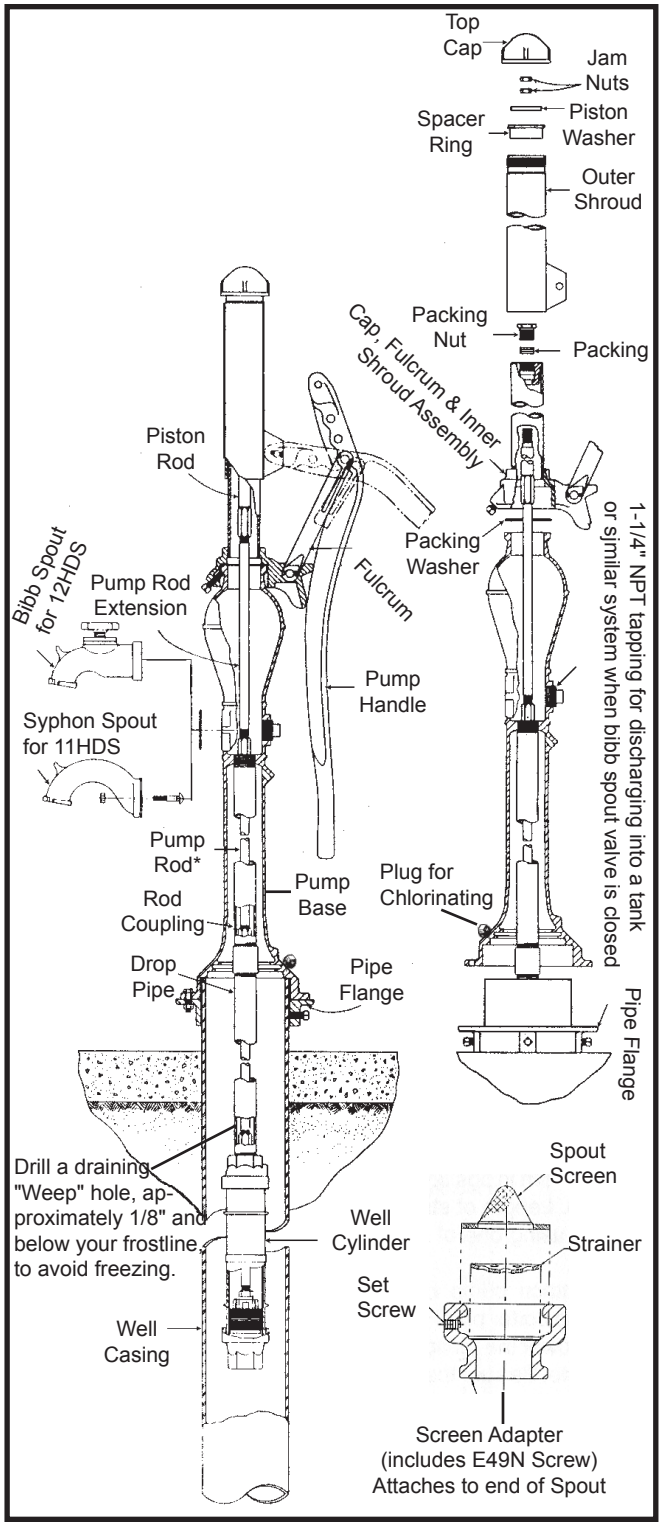
With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure.

1. Slip pipe flange (must be ordered separately) over well casing. Flange not required but may be used if preferred.
2. Screw 7/16 x 7/16 rod coupling (may already be installed) onto pump rod. Assemble pump rod extension (HD90) securely into rod coupling. Assemble rod coupling supplied with pump (7/16x7/16RC) onto top of rod extension followed by piston rod (DP72).

Note: When tightening piston rod into rod coupling, grip piston rod as close to rod coupling as possible to avoid damaging the rod surface that passes through packing assembly.

3. Guide pump base over piston rod and attach base securely to drop pipe. Note: Base is internally tapped 1-1/4" NPT.
4. Position packing washer (O81) onto top of pump base.
5. Guide cap and inner shroud assembly over piston rod until it rests on top of packing washer and pump base. Tighten 3 set screws uniformly and securely to draw cap down tight upon base and washer.
6. Install Teflon packings (DP134), consisting of 3 rings, one ring at a time, into packing housing and around piston rod, being sure each ring is properly seated in bottom of housing. Note: Alternate cuts in ring approximately 90° from each other when installing.
7. Install packing nut (O31) and tighten down onto packing until a slight drag is felt on piston rod when raised. Note: It may be necessary to tighten further if leakage is noted when pump is in operation. Overtightening may make operating pump difficult.
8. Guide outer shroud (DP66P) over inner shroud followed by spacer ring (DP61) and spacer washer (DP62).
9. Install one jam nut (DP22) and tighten, then install other jam nut and tighten followed by top cap (DP60P).
10. Assemble pump handle (HF153) to fulcrum using pin (O54) and cotter pin (HD58). When installing pump handle with pin in position shown on drawing there will be a 10" stroke. Length of stroke may be varied to 7-1/2" or 5" simply by using one of the other holes available in pump handle.
11. Attach pump handle to outer shroud using pin (HF61) and cotter pin (HF57).
12. Lower the pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing.
13. With pump handle operated in the extreme upper or lower position, the cylinder plunger must not strike the bottom or top of cylinder in these positions respectively. Some adjustment in length of Drop Pipe or Pump Rod may be required to utilize the 10 inch stroke.
14. Attach syphon spout (O9) for 11HDS) or bibb spout (O7 for 12HDS) along with gasket (O80) to base using the 2 carriage bolts and nuts provided.
15. Attach Screen Adapter Assembly (HD189, DP31, HD190) to end of spout, 1/4 turn and tighten set screw to lock to spout.



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HAND PUMP INSTALLATION INSTRUCTIONS - 1DFHCS & 1DFHFS

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

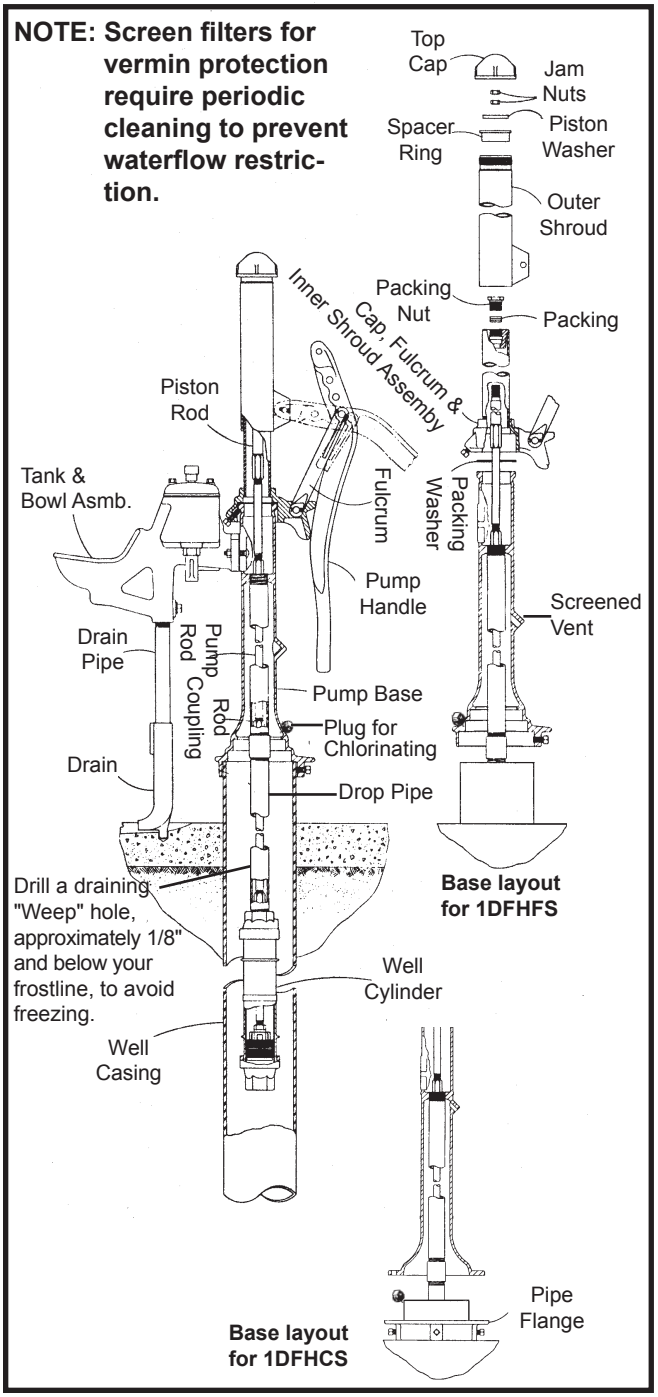
Assemble pump following the procedure below and drawings for 1DFHCS or 1DFHFS pumps respectively.

1. Slip pipe flange (must be ordered separately) over well casing (1DFHCS only). Flange not required on 1DFHFS pumps.
2. Screw a 7/16 x 7/16 rod coupling onto pump rod in well. Assemble pump rod extension (HD90 for 1DFHCS pumps) or extension (DP90 for 1DFHFS pumps) securely onto rod coupling followed by rod coupling (7/16x7/16RC), supplied with pump, onto other end of rod extension. Assemble piston rod (DP72) into other end of rod coupling.

Note: When tightening piston rod into rod coupling, grip piston rod as close to rod coupling as possible to avoid damaging the rod surface that passes through packing assembly.

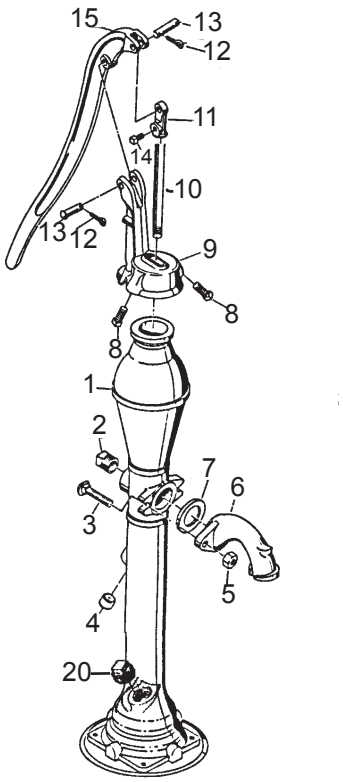
3. Guide pump base over piston rod and attach base securely to drop pipe. Note: Base is internally tapped 1-1/4" NPT.
4. Position packing washer (O81) onto top of pump base.
5. Guide cap and inner shroud assembly over piston rod until it rests on top of packing washer and pump base. Tighten 3 set screws uniformly and securely to draw cap down tight against base and washer.
6. Install Teflon packings (DP134), consisting of 3 rings, one ring at a time, into packing housing and around piston rod, being sure each ring is properly seated in bottom of housing. Note: Alternate cuts in ring approximately 90° from each other when installing.
7. Install packing nut (O31) and tighten down onto packing until a slight drag is felt on piston rod when raised. Note: It may be necessary to tighten further if leakage is noted when pump is in operation. Overtightening may make operating pump difficult.
8. Guide outer shroud (DP66P) over inner shroud followed by spacer ring (DP61) and spacer washer (DP62).
9. Install one jam nut (DP22) and tighten, then install other jam nut and tighten followed by top cap (DP60).
10. Assemble pump handle (HF153) to fulcrum using pin (O54) and cotter pin (HD58). When installing pump handle with pin in position shown on drawing there will be a 10" stroke. Length of stroke may be varied to 7-1/2" or 5" simply by using one of the other holes available in pump handle.
11. Attach pump handle to outer shroud using pin (HF61) and cotter pin (HF57).
12. Lower the pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing. This is for the pump model number 1DFHCS only. In the case of the model 1DFHFS, the base sets directly onto the casing and is secured by tightening the 4 set screws in the base, no flange is required.
13. With the pump handle in the extreme upper or lower position, the cylinder plunger must not strike the bottom or top of cylinder in these positions respectively. Some adjustment in length of the Drop Pipe or Pump Rod may be required to utilize the 10 inch stroke.
14. Assemble the tank and bowl assembly (DP58) along with gasket (DP11) securely to base outlet using the 2 carriage bolts and nuts supplied.
15. Screw drain pipe (DP18) into bottom of bowl assembly, followed by the drain (DP16). Note: Drain outlet to be directed away from pump operator.

NOTE: Screen filters for vermin protection require periodic cleaning to prevent waterflow restriction.



Hand Pumps
Models 11HA

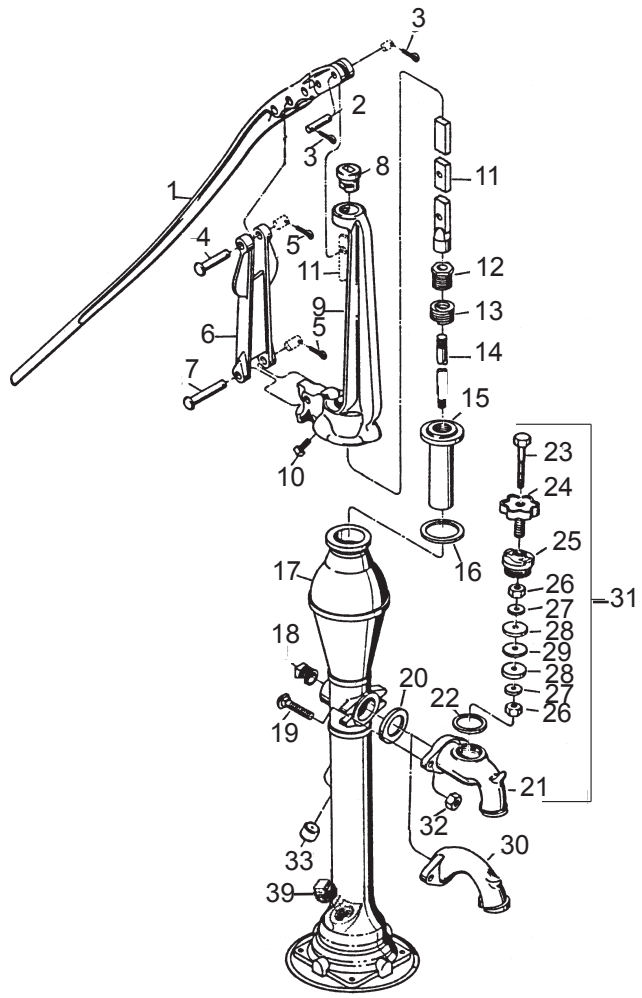
Lift Hand Pump			
Model No.			**11HA**
Item	Qty	Description	Ord. No.
1	1	Base & plug assembly	HD140
2	1	Standard Pipe plug 1-1/4" NPT	HD71
3	2	Bolt, 3/8"-16NC x 2-1/4"	HD70
4	1	Screen Vent	PS585A
5	2	Hex Nut 3/8-16NC	UB17
6	1	Siphon Spout	O9
7	1	Gasket	O80
8	2	Set Screw-1/2"-13NC x 1-1/4"	PS11Ø
9	1	Cap Assby includes item #8, 12 & 13	HA152
10	1	Pump Rod	HA52
11	1	Rod Eye & Set Screw Assby.	HA155
12	2	Cotter Pin	HF57
13	2	Pin, handle to cap 1/2" x 2-1/4" Long	EP54
14	1	Set screw, 1/2"-13NC x 1"	HF30
15	1	Handle, pin & rod eye assby includes	HA153
		#11, 12, 13 & 14	
20	1	Pipe Plug, 1" NPT	SW33

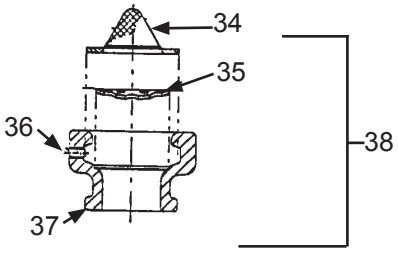


Model 11HA

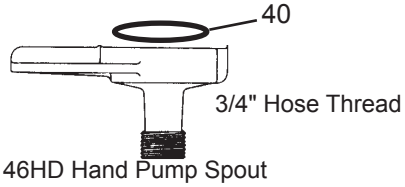
Hand Pumps

Models 11HD &11HDA, 12HD & 12HDA





Screen Adapter attaches to end of spout.

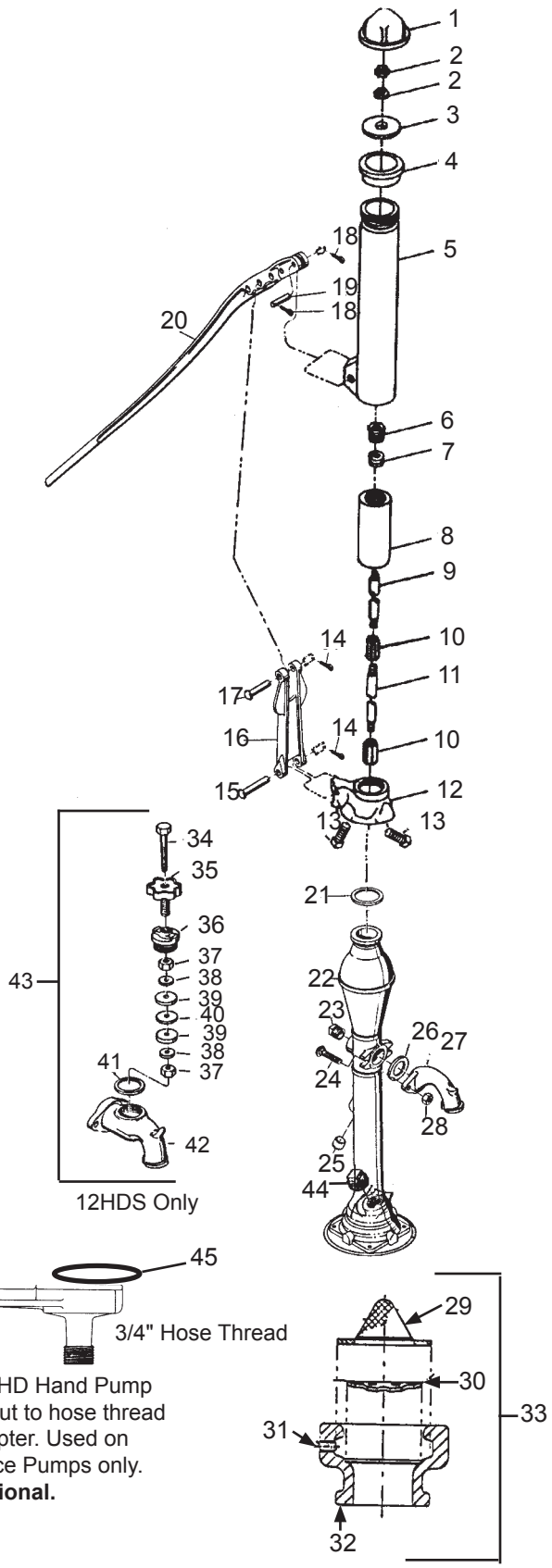


146HD Hand Pump Spout to hose thread adapter. Used on Force Pumps only. **Optional.**

Force Hand Pumps			
Model No. 11HD, 11HDA, 12HD & 12HDA			
Item	Qty	Description	Ord. No.
1	1	Handle & Pin Assby, includes #2 & 3	HF153
2	1	Pump Pin	HF61A
3	2	Cotter Pin	HF57
4	1	Fulcrum & Handle Pin 5/8" x 3"	O54
5	2	Cotter Pin	HF57
6	1	Fulcrum includes #4, 5 & 7	O400
7	1	Fulcrum & Cap Pin 5/8" x 3-3/4"	O53
8	1	Upper Piston Bar Guide	O460
9	1	Pump Cap includes #10	O200
10	3	Set Screw 1/2"-13NC x 1-1/2"	HD59
11	1	Flat Piston Bar	O50
12	1	Packing Nut	O31
13	1	Valve Stem Packg-Graphite rope 3/16" x 19"	HD67
14	1	Piston Rod (16 7/8" long) 303 S.S.	O52
15	1	Packing Flange	O6
16	1	Packing Washer 1/16" in. thick	O81
17	1	Base & Plug Assby. - 1-1/4"	HD140
17	1	Base & Plug Assby. - 2"	HD140A
18	1	Pipe Plug, 1-1/4" NPT	HD71
19	2	Bolt, 3/8"-16NC x 2-1/4"	HD70
20	1	Gasket 1/8" thick	O80
21	1	Bibb Spout Body Casting	O37FRO
22	1	Packing Washer	TP82
---	1	Valve Assby. includes #22 thru 29	HD155
23	1	Hex Head Cap Screw 3/8" x 3-1/2"	HD34
24	1	Hand wheel & screw assby.	HD156FRO
25	1	Cap	O38FRO
26	2	Nut 3/8"-16NC	UB17
27	2	Backing Washer	O41
28	2	Rubber Valve Disk	O43
29	1	Separating Washer	O42
30	1	Siphon Spout for 11HD	O9
31	1	Bibb Spout Assby. includes #21-29	O7
32	2	Hex Nut, 3/8" - 16NC	UB17
33	1	Screen Vent	PS585A
34	1	Spout Screen	HD190
35	1	Strainer	DP31
36	1	Set screw, 1/4" x 20 x 3/8" L	E49N
37	1	Screen Adapter includes #36	HD189
38	1	Hand Pump Screen Adapter Kit	1HPS
39	1	Pipe Plug, 1" NPT	SW33
40	1	Gasket	HD69

Hand Pumps

Models 11HDS & 12HDS



Force Hand Pumps			
Model No.			**11HDS & 12HDS**
Item	Qty	Description	Ord. No.
1	1	Top Cap	DP60P
2	2	Jam Nut	DP22
3	1	Piston Washer	DP62
4	1	Spacer Ring	DP61
5	1	Outer Shroud Assby	DP66P
6	1	Packing Nut	O31
7	1	Teflon Packing	DP134
8	1	Inner Shroud Assembly	DP68P
9	1	Piston Rod	DP72
10	2	Rod Coupling	7/16x7/16RC
11	1	Pump Rod extension 13-3/8" L.	HD90
12	1	Cap (includes #13)	DP202P
13	3	Set Screw 1/2-13NC x 1-1/2" L.	HD59
14	2	Cotter Pin	HF57
15	1	Fulcrum & Cap Pin, 5/8" x 3-3/4"	O53
16	1	Fulcrum includes 14, 15, 17	O400
17	1	Fulcrum & Handle Pin, 5/8" x 3"	O54
18	2	Cotter Pin	HF57
19	1	Pump Pin	HF61A
20	1	Handle & Pin Assby, includes #18 & 19	HF153
21	1	Packing Washer	O81
22	1	Base & Plug Assby.-1-1/4"	HD140
---	1	Valve Assby. includes #34 thru 41	HD155
23	1	Standard Pipe Plug, 1-1/4" NPT	HD71
24	2	Bolt, 3/8"-16NC x 2-1/4" L	HD70
25	1	Screen Vent	PS585A
26	1	Gasket	O80
27	1	Siphon Spout for 11HD	O9
28	2	Hex Nut, 3/8"-16NC	UB17
29	1	Spout Screen	HD190
30	1	Strainer	DP31
31	1	Screw, 1/4" x 20 x 3/8" L.	E49N
32	1	Screen Adapter includes #31	HD189
33	1	Hand Pump screen adapter kit	1HPS
34	1	Hex Head cap screw 3/8" x 3-1/2"	HD34
35	1	Handwheel & Screw Assby.	HD156FRO
36	1	Cap	O38FRO
37	2	Hex Nut 3/8" x 16NC	UB17
38	2	Backing Washer	O41
39	2	Rubber Valve Disk	O43
40	1	Separating Washer	O42
41	1	Packing Washer	TP82
42	1	Bibb Spout Body Casting	O37FRO
43	1	Bibb Spout Assby. includes #34-42	O7
44	1	Pipe Plug, 1" NPT	SW33
45	1	Gasket	HD69

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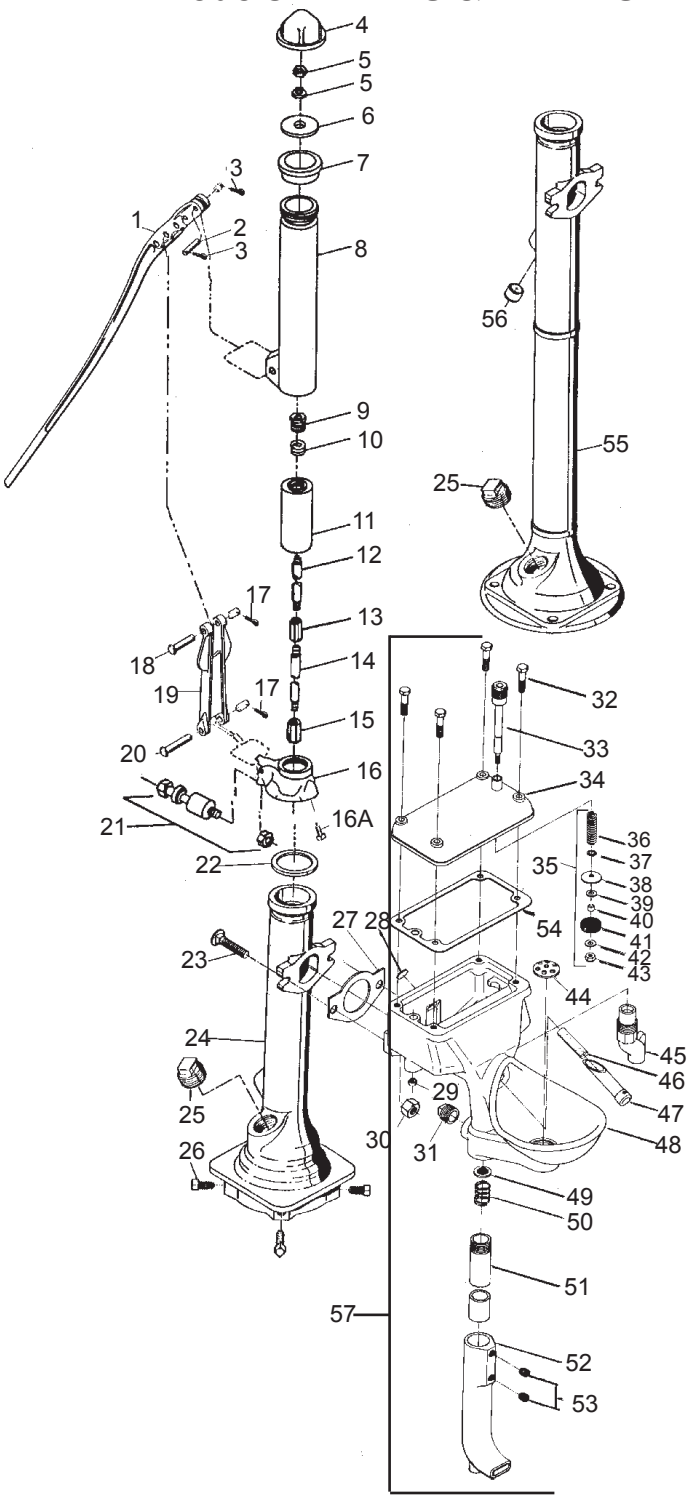
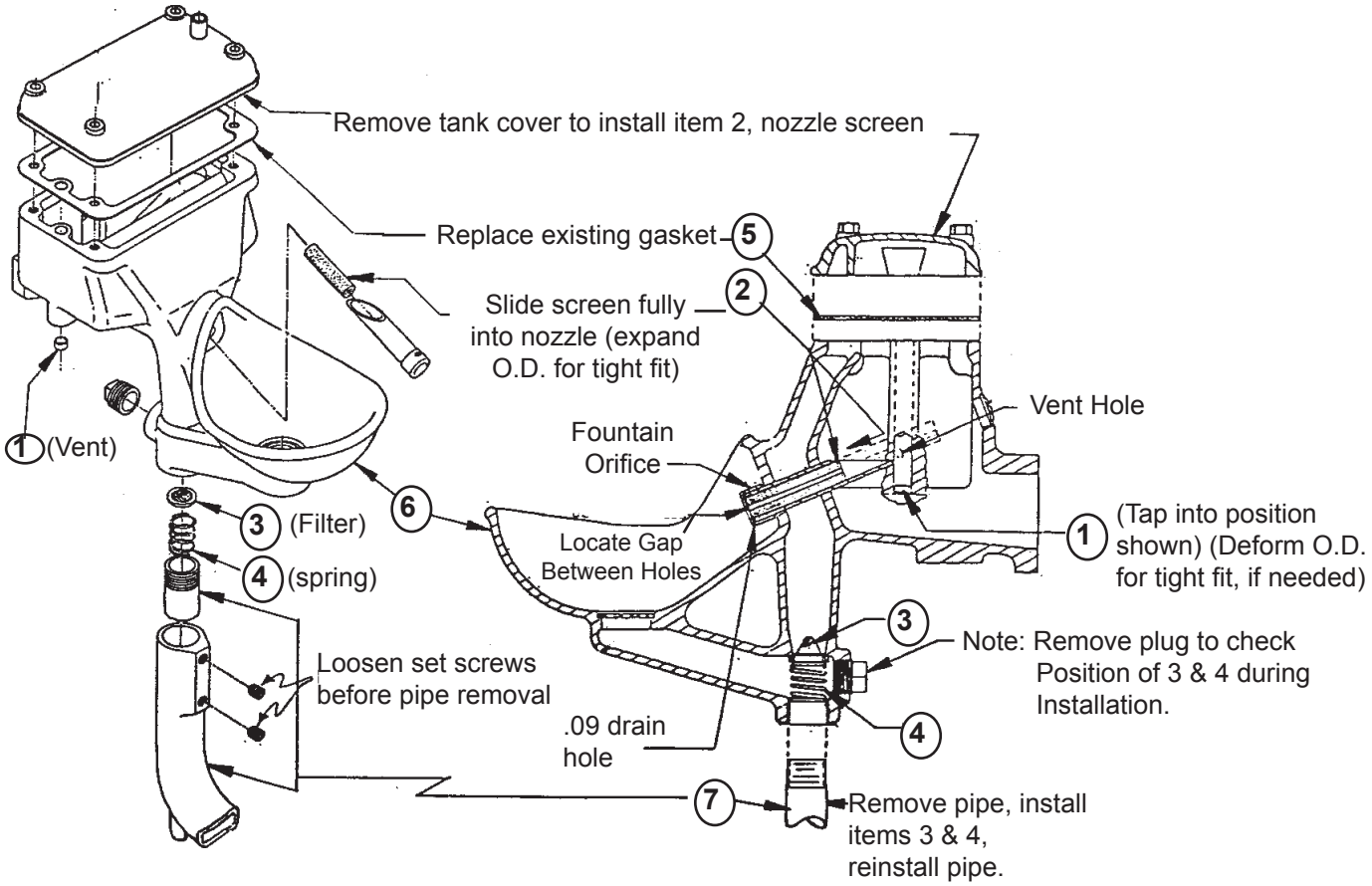
Drinking Fountain Pumps

Models 1DFHCS & 1DFHFS



Model No.			1DFHCS & 1DFHFS
Item	Qty	Description	Ord. No.
1	1	Handle & Pin Assby. includes #2 & 3	HF153
2	1	Pump Pin	HF61A
3	2	Cotter Pin	HF57
4	1	Top Cap	DP60P
5	2	Jam Nut	DP22
6	1	Piston Washer	DP62
7	1	Spacer Ring	DP61
8	1	Outer Shroud Assby	DP66P
9	1	Packing Nut 1 1/8-12-NF	O31
10	1	Teflon Packing	DP134
11	1	Inner Shroud Assby	DP68P
12	1	Piston Rod 20 1/4" Long	DP72
13	1	Rod Coupling	7/16x7/16RC
14	1	Pump Rod Ext. (1DFHFS only) - 4-1/2" Pump Rod Ext. (1DFHCS only) - 13-3/8"	DP90 HD90
15	1	Rod Coupling	7/16x7/16RC
16	1	Cap (includes #16A)	DP202P
16A	3	Set Screw 1/2-13NC x 1-1/2"	HD59
17	2	Cotter Pin	HF57
18	1	Fulcrum & Handle Pin	O54
19	1	Fulcrum includes #17, 18, 20	O400
20	1	Fulcrum & Cap Pin	O53
21	1	Rubber Bumper Assby.	10DP
22	1	Packing Washer	O81
23	2	Bolt-Tank to Base 7/16-14NC x 2" L.	DP70
24	1	Base Includes #25, 26 & 27 for 1DFHFS	HF50
25	1	Pipe Plug, 1" NPT	SW33
26	4	Set Screw-Base 1/2-13NC x 2" L.	HF33
27	1	Gasket-Tank to Base	DP11
28	1	3/4" Socket Plug	DP20
29	1	Screen Vent	PS585B
30	2	Nut, 7/16-14NC	PJ50
31	1	Pipe Plug- 3/4" NPT	DP20
32	4	Screw, 3/8-16 x 1-3/4" L.	TX15
33	1	Valve Handle & Shaft Assby.	DP56
34	1	Cover	DP53FRO
35	1	Valve Parts includes # 36 - 43	DP59
36	1	Valve Spring	DP40
37	1	Snap Ring	DP46
38	1	Spring Washer Cupped	DP47
39	1	Washer (Back up)	SW54
40	1	Spacer	DP48
41	1	Valve	SW11
42	1	Washer-Stainless Steel	UN243
43	1	Hex Lock Nut	DP49
44	1	Strainer	DP31
45	1	Spout	DP39
46	1	Nozzle Screen	DP197
47	1	Nozzle	DP30
48	1	Reservoir Assby, includes #27, 28, 29, 31, 44, 45, 46, 47, 49, 50 & 54	DP58
49	1	Filter Washer	DP196
50	1	Holding Spring	DP195
51	1	Drain Pipe 1" Std. Pipe x 23-3/16" L.	DP18
52	1	Drain Assby. includes #53	DP16
53	2	Set Screw 7/16-14NC x 1/2" L.	DP17
54	1	Cover Gasket	DP12
55	1	Base, includes #27, 25 & 56 for 1DFHCS	HC50
56	1	Screen Vent	PS585A
57	1	Fountain Assembly	158DP
---		Fountain Screening Kit inc. #29,46,49,50,54	199DP
58	1	Syphon Spout	O9

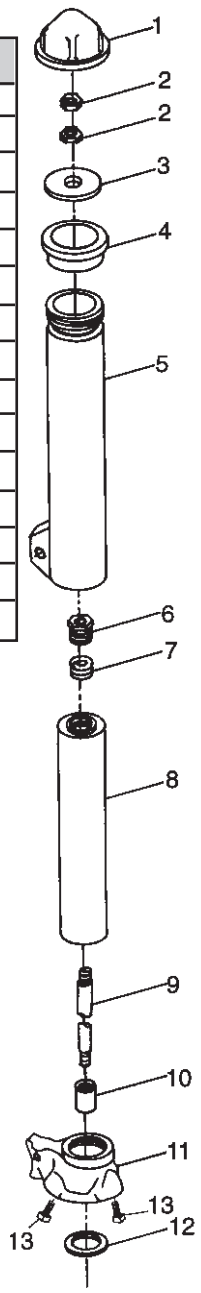
Fountain Screening Kit
Kit No. 199DP


Remove tank cover to install item 2, nozzle screen
Replace existing gasket
5
Slide screen fully into nozzle (expand O.D. for tight fit)
2
Vent Hole
1 (Vent)
Fountain Orifice
6
3 (Filter)
4 (spring)
Locate Gap Between Holes
1 (Tap into position shown) (Deform O.D. for tight fit, if needed)
3
Note: Remove plug to check Position of 3 & 4 during Installation.
Loosen set screws before pipe removal
.09 drain hole
4
7
Remove pipe, install items 3 & 4, reinstall pipe.

Item	Qty	Description	Ord. No.
1	1	1/2" Vent Screen	PS585B
2	1	Nozzle Screen	DP197
3	1	1-1/4" O.D. Filter Washer	DP196
4	1	Helical Comp. Spring	DP196
5	1	Cover Gasket (New)	DP12
6	---	Existing Fountain	------
7	---	Drain Assembly	------

Installation Instructions
(For converting Old Style Only)

Model No.			100DPS
Item	Qty	Description	Ord. No.
1	1	Top Cap	DP60P
2	2	Jam Nut	DP22
3	1	Piston Washer	DP62
4	1	Spacer Ring	DP61
5	1	Outer Shroud Assembly	DP66P
6	1	Packing Nut	O31
7	1	Teflon Packing	DP134
8	1	Inner Shroud Assembly	DP68P
9	1	Piston Rod 20" long	DP52
10	1	Coupling 3/8"	PS182
11	1	Pump Cap (includes item #13)	DP202P
12	1	Gasket	O81
13	3	Set Screw	HD59
	1	Rubber Bumper Assembly	10DP



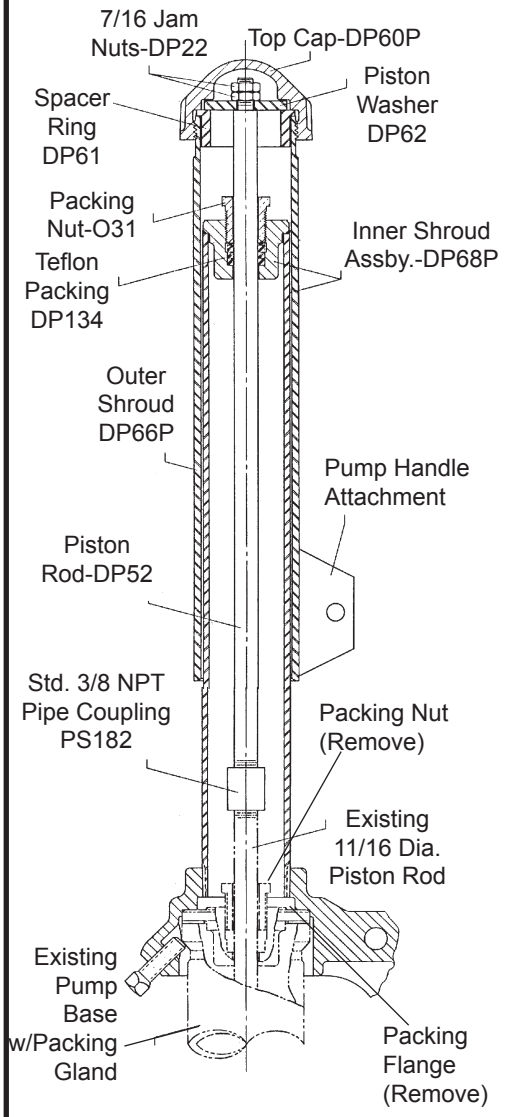
Step 1. Remove handle and fulcrum from existing installation.
Step 2. Loosen set screws and remove cap from the pump.
Step 3. Lift piston rod and attach vise grip to insure the piston rod does not drop through pump base.

IF CONVERTING OLD STYLE PUMP, EXISTING PACKING FLANGE AND PACKING NUT MUST BE REMOVED

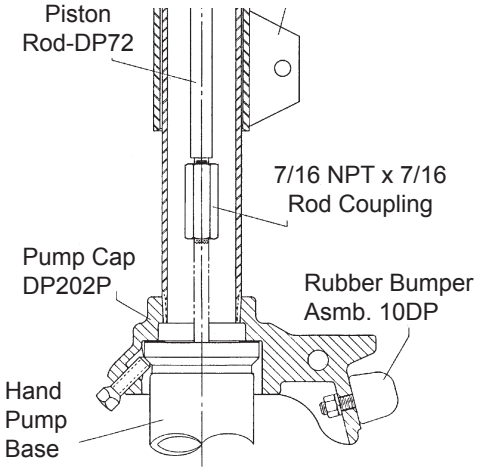
Step 4. Remove the flat bar from piston rod.
Step 5. Attach 3/8 coupling to the piston rod.
Step 6. Attach piston rod from conversion kit to 3/8 coupling.
Step 7 Remove vise grip.
Step 8. Install pump cap assembly DP202P.
Step 9. Enter teflon packing around piston rod at top of cap.
Step 10. Screw in packing nut O31.
Step 11. Install outer shroud DP66P.
Step 12. Install spacer ring DP61.
Step 13. Install piston washer DP62.
Step 14. Fasten (2) jam nuts DP22 to top of piston.
Step. 15. Raise outer shroud and attach top cap DP60P tighten securely.
Step 16. Replace fulcrum and attach handle to outer shroud.

WHEN USED ON NEW INSTALLATION - FOLLOW HAND PUMP INSTALLATION INSTRUCTIONS

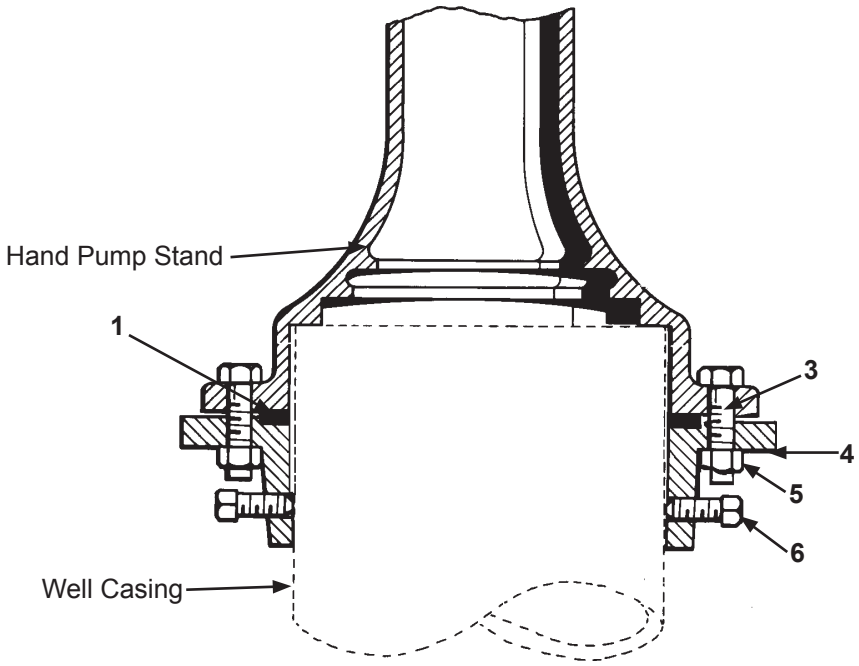
View of Old Style Installation



View of Current Hand Pump with Shroud



Pump Flanges



Model No.		64MP, 65MP & 66MP	
Item	Qty	Description	Ord. No.
1	1	Rubber Flange Gasket for 64MP, 65MP & 66MP Flanges	MP36
3	4	3/8" Cap Screw	KH320
4	4	Washer	SW68
5	4	3/8" Nut	UB17
6	4	1/2" x 1" Sq. Head Screw	HF30

Installation Instructions

The well casing must extend above the pump platform sufficiently enough to allow 2-1/2" between the bottom of the flange and the pump platform to allow for heaving of the pump platform due to frosts. If a concrete pump platform is constructed, space should be left between the concrete and the well casing so that movement of the concrete platform by frost will not disturb the well casing. This space should be treated as a typical expansion joint.

Slip the flange over the well casing. Set the pump onto the casing and bring the flange up to the pump base. Bolt the flange to the pump base and orientate the pump spout to the desired position. Tighten the flange set screws firmly but carefully so that no damage to the flange results. While tightening the flange set screws check for proper vertical alignment of pump.

After the flange has been located and tightened, remove the pump from the flange.

Place the rubber gasket in position. If a vermin resistant seal is required place a silicone bead between the outside of the well casing and the pump flange. You may also use plumbers putty or similar product. (not supplied) Place the pump back on the flange and insert the bolts through the pump base and flange, tightening uniformly, thereby compressing the rubber and thoroughly sealing the pump to the flange.

An air vent should be provided in the pump stand to admit fresh air to the well. A new pump can be purchased with a vent.

Monitor® AW

INSTRUCTION MANUAL
AT-THE-WELL SCREW-IN CONTROL KIT
FOR RECIPROCATING PUMPS

GENERAL

These instructions and parts list apply to the following Ordering Numbers:

(2-8) 8AWAPA
(2-8) 8AWAA

INSTALLATION

Follow the instructions for installing the Monitor Pitless Unit up to the point where the spool is attached to the drop pipe. Then proceed with the following: (Numbers in "()" apply to Figure 3).

1. Remove 3/8" pipe plug from spool.
2. Dope brass threads on bottom of flexible fluid separator assembly (6) and then screw assembly into spool.
3. Lower spool into pitless case while carefully uncoiling capillary tube. CAUTION: Avoid twisting or kinking tube.
4. **Remove jam nut, cap and rubber gasket that holds fluid in tube,** (3) from upper brass fitting and then slide fitting through 5/8" hole in pitless unit cap. Replace jam nut and tighten. NOTE: Loss of fluid may cause switch to react inconsistantly.
5. Dope threads of upper brass fitting and then screw on pressure switch (2). CAUTION: Overtightening of pressure switch may crack hex portion of switch.
6. Connect electrical wiring. (Turn over pump by hand to check for correct adjustment). Turn on pump and operate for several minutes; then check for fluid leaks.
7. Check pressure switch setting.

TROUBLESHOOTING

CAUTION: Never remove pressure switch without first releasing all water system pressure. Not releasing all water system pressure will cause a loss of control fluid.

Loss of Control Fluid may be caused by:

A. A leak between switch and upper brass fitting. **Remedy:** Leaks can be eliminated by use of plastic pipe dope on threads.
B. Loose pressure switch diaphragm. **Remedy:** tighten screws that hold diaphragm.
C. Cracked hex portion of pressure switch. **Remedy:** replace switch.

Cycling of Pressure Switch may be caused by:

A. Too small a discharge line. **Remedy**: replace line; install buried tank or use smaller cylinder.
B. Waterlogged pressure tank. **Remedy:** replace air volume control and/or drain or

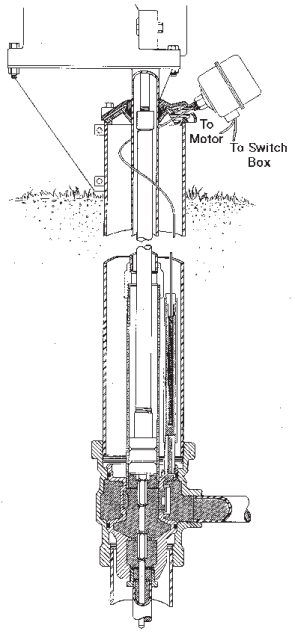


Figure 1. Monitor PR Unit cutaway to show 8AWAPA Control Kit installed in operating position.

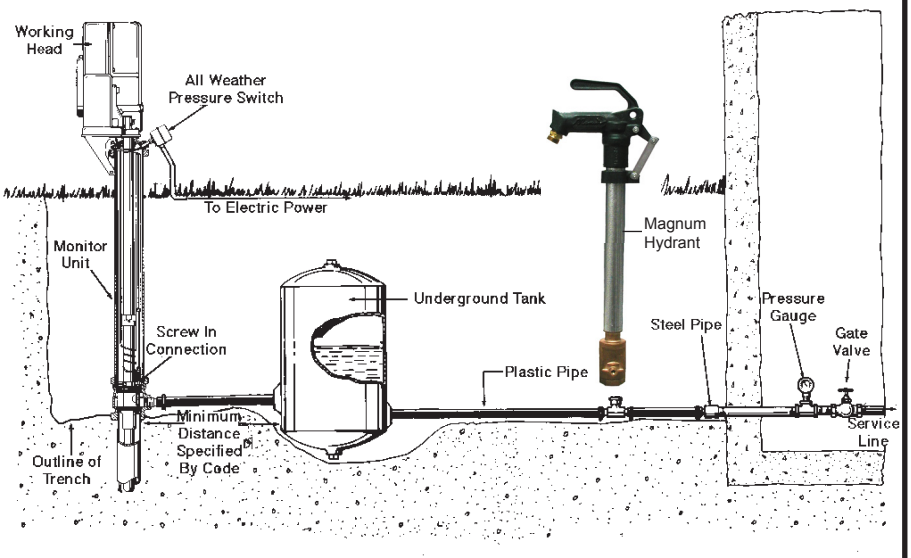


Figure 2. Typical At-the-well reciprocating pump installation showing 8AWAPA control kit.

pressure charge tank.

C. Inadequate differential setting on pressure switch. **Remedy:** Increase setting until cycling stops.

Refilling Control with Fluid

1. Disconnect wires, remove switch, and then reconnect wires to pump.
2. Start pump and run until fluid is visible at top of the upper brass fitting (It will not be necessary to exceed 40 or 45 psi.).
3. Screw a 1/4" pipe coupling onto the brass fitting and then screw a piece of 1/4" pipe approximately 20" long into coupling and fill with Monitor pressure control fluid. Note: 3/8" I.D. plastic or rubber tubing may be used instead of the pipe.
4. Release system pressure and wait several minutes after the system pressure registers "0" psi before removing the tube or fittings.
5. Place pipe dope on the brass fitting and replace pressure switch.

IF EXTENSION FROM MALE BRASS FITTING IS REQUIRED, THIS ALSO MUST BE FILLED WITH FLUID.

NOTE: If tank is installed beyond 15' of control, use at your own risk.
NOTE: Pressure relief valve is recommended on all installations - 120 PSI maximum.

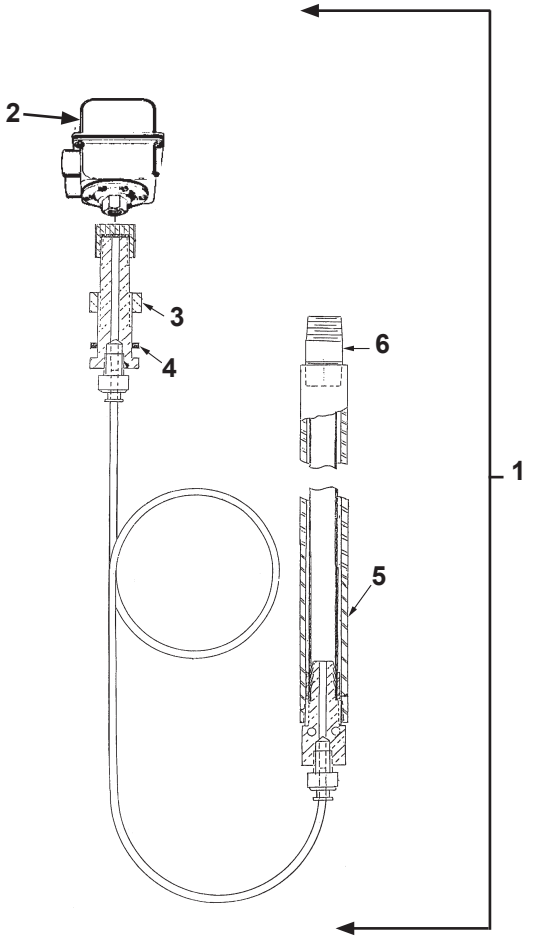


Figure 3. Exploded View of 8AWAPA Control Kit

Model No.			**8AWAPA**
Item	Qty	Description	Ord. No.
1	1	Control kit with pressure switch	8AWAPA
1	1	Same as 8AWAPA less pressure switch	8AWAA
2	1	All-weather pressure switch, 1/4" female tapping set 30-50 psi, 80 lbs. maximum, 2 horsepower	0AWP
3	1	Brass jam nut-5/8"	PS9
4	1	Gasket-7/8"x41/64"x1/16"	PS2
5	1	Tube housing, only -galvanized	PS15A
6	1	Nipple 3/8" x 1-1/2" Stainless Steel	PS181S1
		Can of control fluid for 8AWAPA controls (Not illustrated).	8AWF

Monitor® AW

INSTRUCTION MANUAL
AT-THE-WELL PLUG-IN CONTROL KIT
FOR RECIPROCATING PUMPS

GENERAL

This manual applies to control kits with the following ordering numbers:

(2-8) 0AWRPA
(2-8) 0AWRA

INSTALLATION

Follow the instructions for installing the Monitor Pitless Unit up to the point where the spool is attached to the drop pipe. Then proceed with the following, (numbers in "( )" refer to Figure 3).

1. Remove 3/8" pipe plug from spool.
2. Dope threads of female plug-in fitting (11) and screw into spool.
3. Lower spool into pitless case.
4. Rivet or screw lift-out bar (6) to control assembly.
5. Lubricate "O" rings (10) with Vaseline.
6. Lower control assembly into pitless unit and plug in. When the control is being plugged in, the lift out bar (Fig. 1) should be turned at right angles to the side of the pitless case (Fig. 1). CAUTION: Avoid twisting or kinking tube.
7. **Remove jam nut (3), cap and rubber gasket that holds fluid in tube,** from upper brass fitting and then slide fitting through 5/8" hole in pitless unit cap. Replace jam nut and tighten. NOTE: Loss of fluid may cause switch to react inconsistantly.
8. Slip cap over drop pipe onto case and secure.
9. Dope threads of upper brass fitting and then screw on pressure switch (2). CAUTION: Overtightening of pressure switch may crack hex portion of switch.
10. Connect electrical wiring. (Turn over pump by hand to check for correct adjustment). Turn on pump and operate for several minutes, then check for fluid leaks.
11. Check pressure switch setting.

TROUBLE-SHOOTING

CAUTION: Never remove pressure switch without first releasing all water system pressure. Not releasing all water system pressure will cause a loss of control fluid.

Loss of Control Fluid may be caused by:

A. A leak between switch and upper brass fitting. **Remedy:** Leaks can be eliminated by use of plastic pipe dope on threads.

B. Loose pressure switch diaphragm.
Remedy: Tighten screws that hold diaphragm.

C. Cracked hex portion of pressure switch.
Remedy: Replace switch.

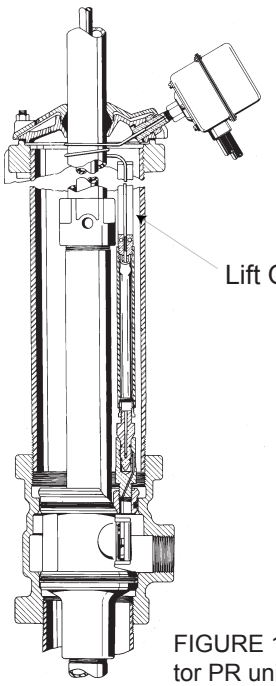


FIGURE 1. Monitor PR unit cutaway to show 0AWRPA control kit installed in operating position.

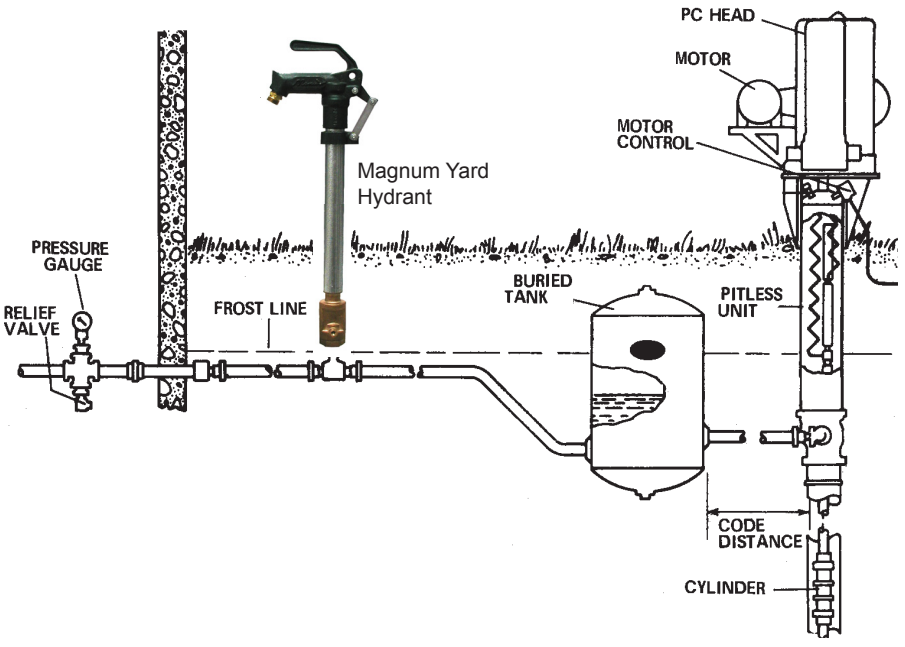


FIGURE 2. Typical At-the-Well Reciprocating pump installation showing 0AWRPA control kit, and underground tank.

Cycling of pressure switch may be caused by:

A. Too small a discharge line.
Remedy: Replace line, install buried tank or use smaller cylinder.

B. Water-logged pressure tank.
Remedy: Replace mechanical air volume control with float and/or drain or pressure charge tank.

C. Inadequate differential setting on pressure switch. **Remedy:** Increase setting until cycling stops.

Refilling Control with Fluid

1. Disconnect wires, remove switch and then reconnect wires to pump.
2. Start pump and run until fluid is visible at the top of the upper brass fitting (It will not be necessary to exceed 40 or 45 PSI).
3. Screw a 1/4" pipe coupling onto the brass fitting and then screw a piece of 1/4" pipe approximately 20" long into coupling and fill with Monitor pressure control fluid. NOTE: 3/8" I.D. plastic or rubber tubing may be used instead of the pipe.
4. Release system pressure and wait several minutes after the system pressure registers "O" PSI before removing the tube or fittings.
5. Place pipe dope on the brass fitting and replace pressure switch.

If extension from male brass fitting is required, this also must be filled with fluid.

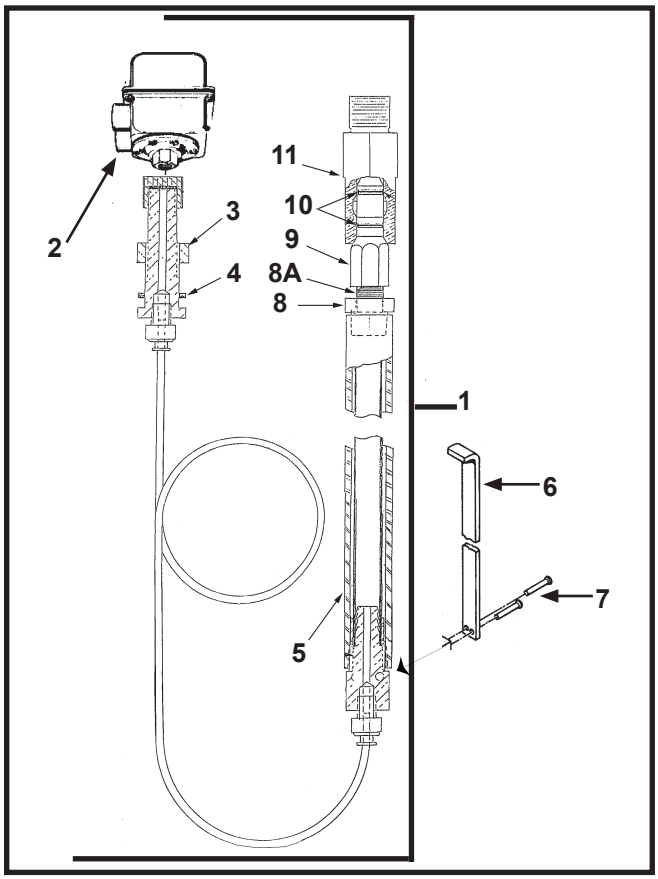


FIGURE 3 EXPLODED VIEW OF AWRPA CONTROL KIT

NOTE: If tank is installed beyond 15' of control, use at your own risk.
NOTE: Pressure relief valve is recommended on all installations - 120 PSI maximum.

Model No.			**0AWRPA**
Item	Qty	Description	Ord. No.
1	1	Plug-in Control Kit with pressure switch	0AWRPA
1	1	Same as above, w/o pressure switch	0AWRA
2	1	Pressure switch	0AWP
3	1	Hex head jam nut 5/8"-18NF	PS9
4	1	Gasket	PS2
5	1	Tube housing	PS15A
6	1	Lift-out Bar - 2'	2PR
		Lift-out Bar - 3'	3PR
		Lift-out Bar - 4'	4PR
		Lift-out Bar - 5'	5PR
		Lift-out Bar - 6'	6PR
		Lift-out Bar - 7'	7PR
		Lift-out Bar - 8'	8PR
7	2	Rivets	PR3
8	1	Reducer Bushing 3/8" x 1/4-NPT	PR4
8A	1	Nipple 3/8" x 1/2" Stainless Steel	PS181S1
9	1	Male plug-in fitting	PR1A
10	2	"O" ring	PS27
11	1	Female plug-in fitting	PS44

Monitor® AW

INSTRUCTION MANUAL
AT-THE-WELL PLUG-IN CONTROL KITS
FOR SUBMERSIBLE PUMPS

GENERAL

This Manual applies to Control Kits with the following Ordering Numbers:

(2-8) OAWSP
(2-8) OAWS

Follow the instructions for installing the Monitor Pitless Unit to the point where the spool or Drop-Pipe Fitting Assembly is attached to the Drop-Pipe, then proceed with the following, (numbers in "( )" refer to Figure 3):

1. Remove 3/8" Pipe Plug from Spool or Drop-Pipe Fitting.
2. Dope threads of female plug-in fitting (10) and screw into spool or drop-pipe fitting.
3. Pull pump cable up through spool or drop-pipe fitting assembly and then lower complete assembly into pitless case.
4. Bolt lift-out bar (3) to mounting block (6) and if a motor control box is installed at the well, bolt it to the lift-out bar. Note: If pressure switch is not supplied with control kit, it should be installed before attaching lift-out bar.

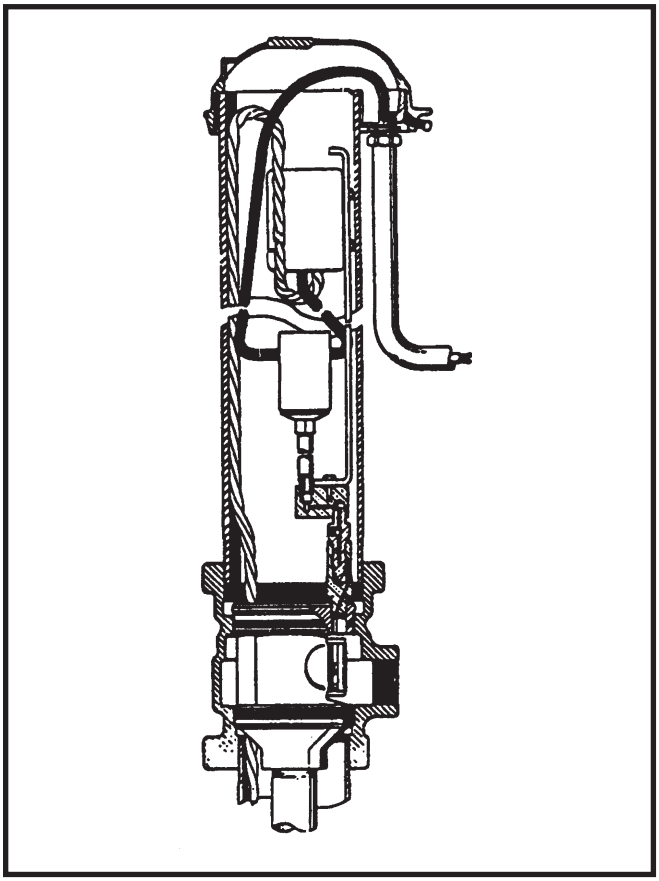


FIGURE 1 MONITOR PS UNIT CUTAWAY TO SHOW 0AWSP CONTROL KIT INSTALLED IN OPERATING POSITION.

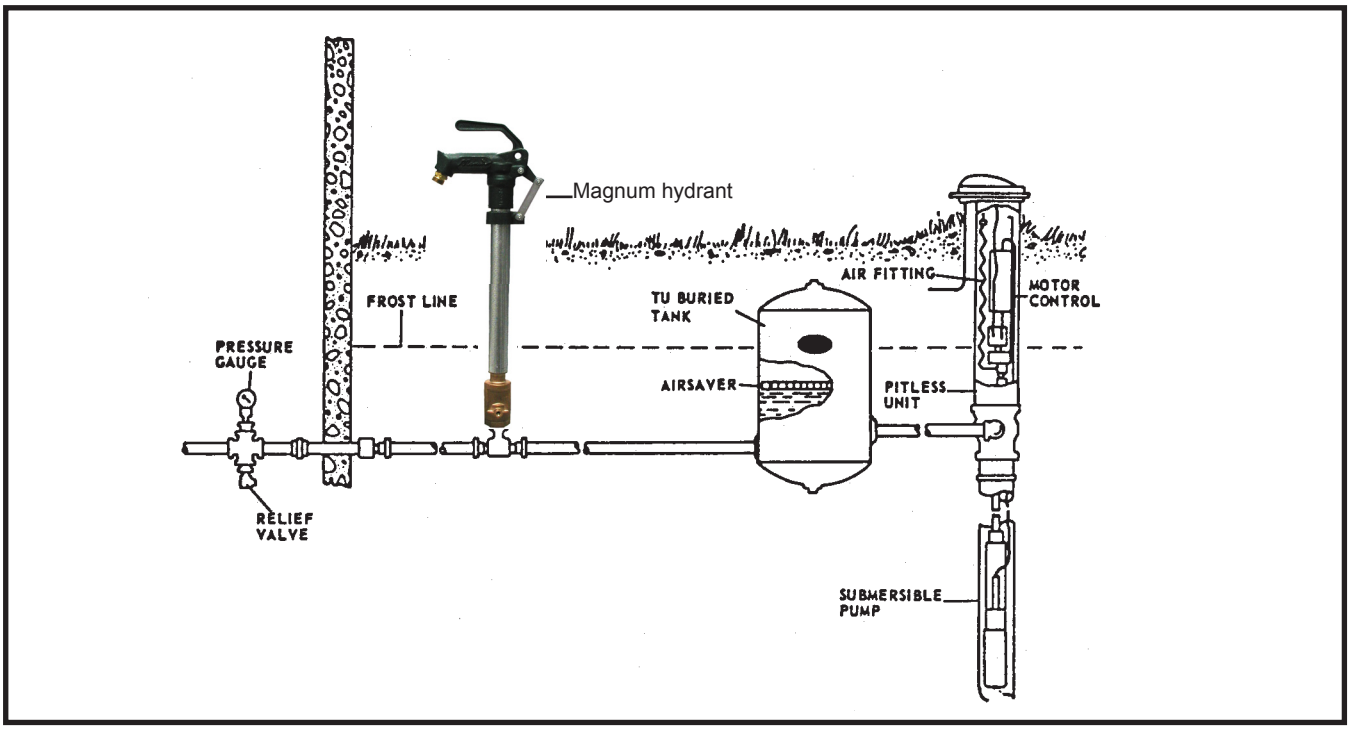


FIGURE 2 TYPICAL AT-THE-WELL SUBMERSIBLE PUMP INSTALLATION SHOWING 0AWSP CONTROL KIT, 8AWC AIR FITTING AND TU AIR SAVER UNDERGROUND TANK.

5. Cut off the pump cable, 3 ft. above the top of the pitless case.
6. Connect pump cable to control box and/or make connection between control box and pressure switch. Run power line through conduit opening in pitless cap and attach to pressure switch.
7. Lubricate "O" rings (8) with Vaseline.
8. Lower complete control assembly into the pitless unit until the plug-in connection is engaged.
9. Start the submersible pump according to pump manufacturer's instructions.
10. Check pressure switch setting and complete installation by securing pitless unit cap.

TROUBLE-SHOOTING

Cycling of Pressure Switch may be caused by:

A. Water-logged System.
Remedy: Replace mechanical air volume control with Float and/or drain or pressure-charge tank.

B. Inadequate differential setting of pressure switch.
Remedy: Increase setting until cycling stops.

C. Too small a discharge line.
Remedy: Replace line or install Monitor Buried Tank adjacent to pitless unit.

NOTE: If tank is installed beyond 15' of control, use at your own risk.

NOTE: Pressure relief valve is recommended on all installations - 120 PSI maximum.

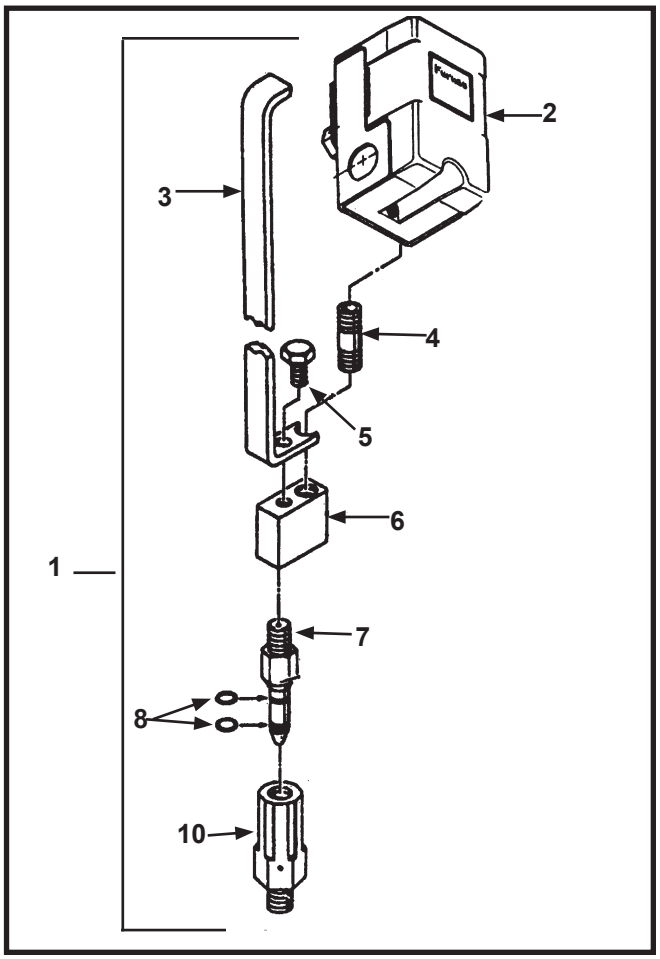


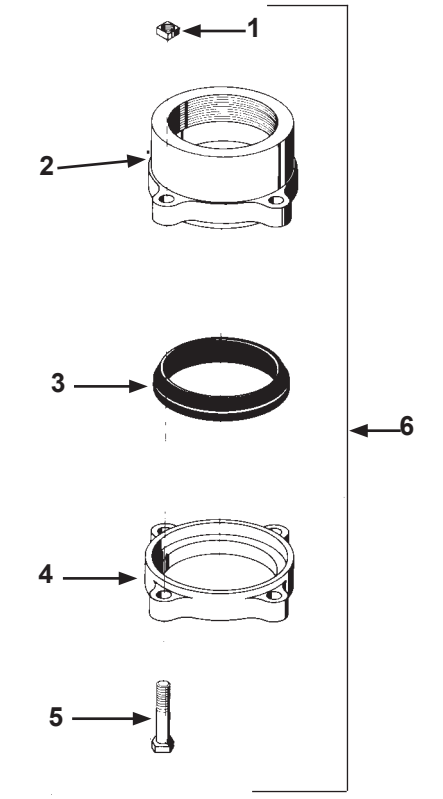
FIGURE 3 EXPLODED VIEW OF 0AWSP CONTROL KIT

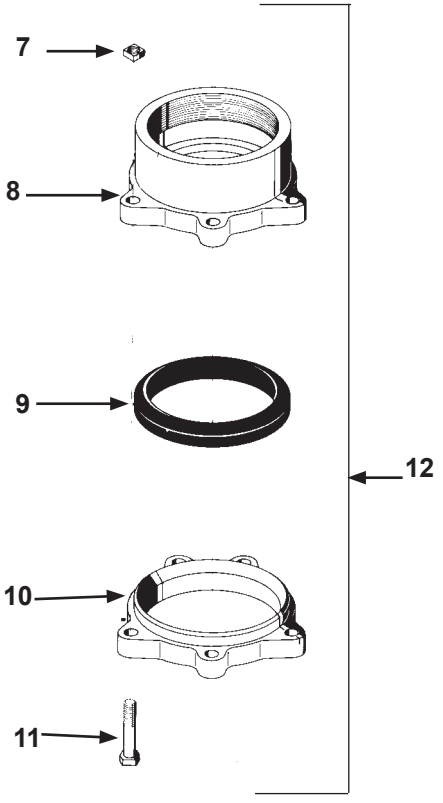
Model No.			**0AWSP**
Item	Qty	Description	Ord. No.
1	1	Plug-in Control Kit with pressure switch PS Units	0AWSP
1	1	Same as above, w/o pressure switch	0AWS
2	1	Pressure switch set 30-50 PSI.	334PC
3	1	Lift-out Bar - 2'	2PS
		Lift-out Bar - 3'	3PS
		Lift-out Bar - 4'	4PS
		Lift-out Bar - 5'	5PS
		Lift-out Bar - 6'	6PS
		Lift-out Bar - 7'	7PS
		Lift-out Bar - 8'	8PS
4	1	Pipe Nipple 1/4"-1-1/2" Stainless Steel	PC332
5	1	Hex Head Cap Screw 5/16"-18NC x 1/2"	PS29
6	1	Mounting block	PS282
7	1	Male Plug-in Fitting	PR1A
8	2	"O" Rings	PS27
10	1	Female plug-in fitting	PS44

Pitless Connectors for 4", 5" & 6" I.D. Well Sizes

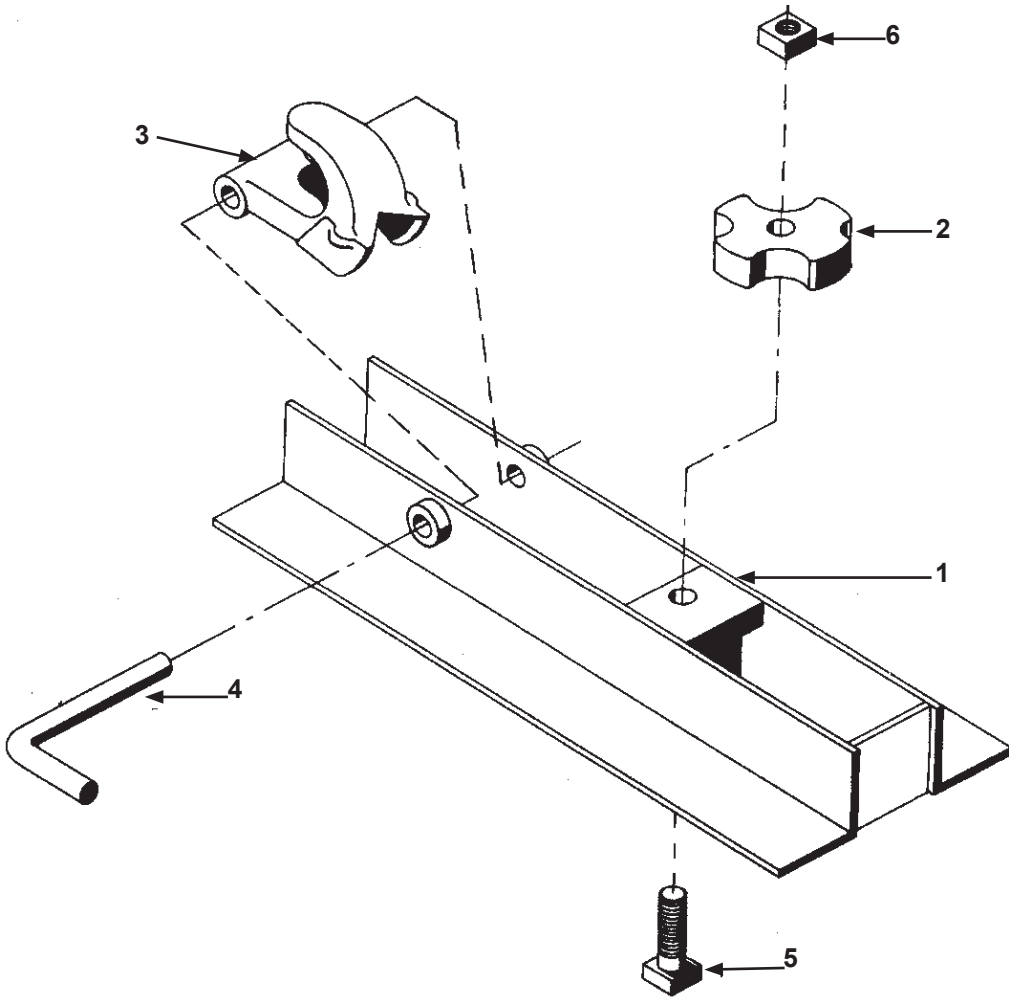
Model No.			4APC 4"	65APC 5"	66APC 6"
Item	Qty	Description	Ord. No.	Ord. No.	Ord. No.
1	4	Sq. Nut 1/2"-13NC	PC127		
2	1	Adapter	APC24		
3	1	Seal Ring	APC14		
4	1	Adapter Ring	APC34		
5	4	Hex Head Bolt 1/2"-13NC	APC7		
		3" Long			
6	1	Connector Assembly (1-5)	4APC		
7	5	Sq. Nut 1/2"-13NC		PC127	PC127(6)
8	1	Adapter		APC55	APC56
9	1	Seal Ring		PS165	PS166
10	1	Depression Ring		APC45	APC46
11	5	Hex Head Bolt 1/2"-13NC		APC7	APC7(6)
		3" Long			
12	1	Connector Assembly (7-11)		65APC	66APC

Note: () designates quantity for that unit.





201PH Pipe Holder



Item	Qty.	Description	Ord. No.
1	1	Holder Frame	PH55
2	1	Adjustable Jaw	PH1FRO
3	1	Clamp Jaw	PH2FRO
4	1	Hinge Pin	PH50
5	1	Machine Bolt	PH8B
6	1	Nut	PH8N